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standard contents

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No. 2538] [VOL. 98
THE ARCHITECTURAL PRESS, War Address: Forty-five The Avenue, Cheam, Surrey. Phone: Vigilant 0087-9

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★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone number of the organizations concerned. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974.
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8.
APRR	Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1.	Euston 2158-9.
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738.
ASB	Architectural Science Board of the Royal Institute of British Architects, 66, Portland Place, W.1.	Welbeck 6927.
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128.
BCGA	British Commercial Gas Assn. 1, Grosvenor Place, S.W.1.	Sloane 4554.
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434.
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385.
BINC	Building Industries National Council. 110, Bickenhall Mansions, W.1.	Welbeck 3335.
BOE	Board of Education. Belgrave Square, S.W.1.	Sloane 4522.
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140.
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246.
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073.
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333.
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W. 1.	Sloane 0421.
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280.
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322.
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 7618.
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477.
EJMA	English Joinery Manufacturers Association (Incorporated), Sackville House, 40, Piccadilly, W.1.	Regent 4448.
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041.
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2664.
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881.
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158.
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577.
IEE	Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676.
IHVE	Institution of Heating and Ventilating Engineers. 21, Tothill Street, S.W. 1.	Whitehall 9609.
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172.
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29.
ISPH	Committee for the Industrial and Scientific Provision of Housing. 3, Albemarle Street, W.1.	Regent 4782-3.
LIDC	Lead Industries Development Council. Rex House, King William Street, E.C.4.	Mansion House 2855.
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767.
MARS	Modern Architectural Research. 8, Clarges Street, W.1.	Grosvenor 2652.
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300.
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4321.
MOLNS	Ministry of Labour and National Service. St. James' Square, S.W.1.	Whitehall 6200.
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.2.	Gerrard 6933.
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711.
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611.
NBR	National Buildings Record. 66, Portland Place, W.1.	Welbeck 1881.
	All Souls' College, Oxford.	Oxford 48809.
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041.
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770.
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808.
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245.
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House S.E.1.	Reliance 7611.
RC	Reconstruction Committee RIBA. 66, Portland Place, W.1.	Welbeck 6927.
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936.
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335.
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274.
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646.
TCPA	Town and Country Planning Association. 13, Suffolk Street, S.W.1.	Whitehall 2881.
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147.
TPI	Town Planning Institute. 11, Arundel Street, Strand, W.C.2.	Temple Bar 4985.

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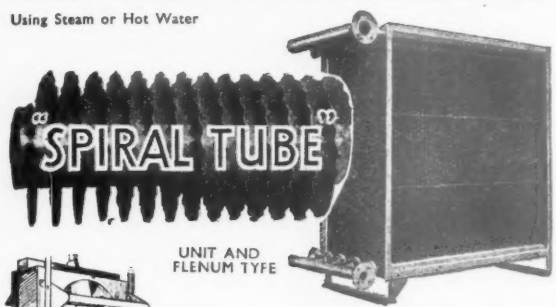
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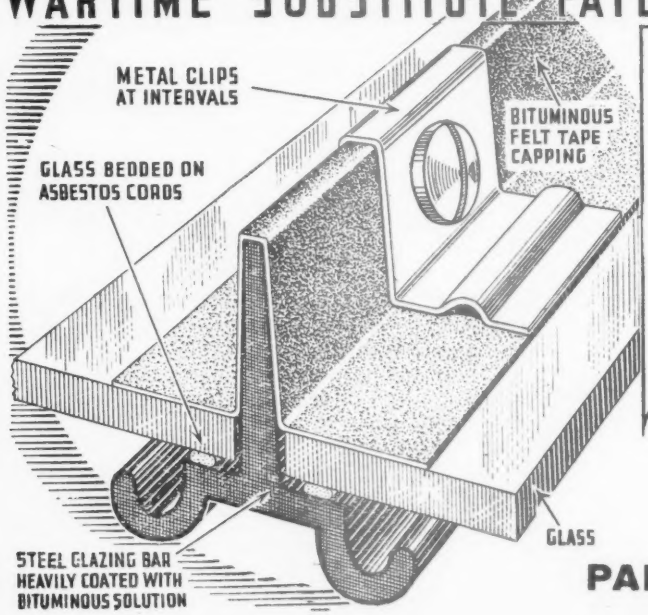
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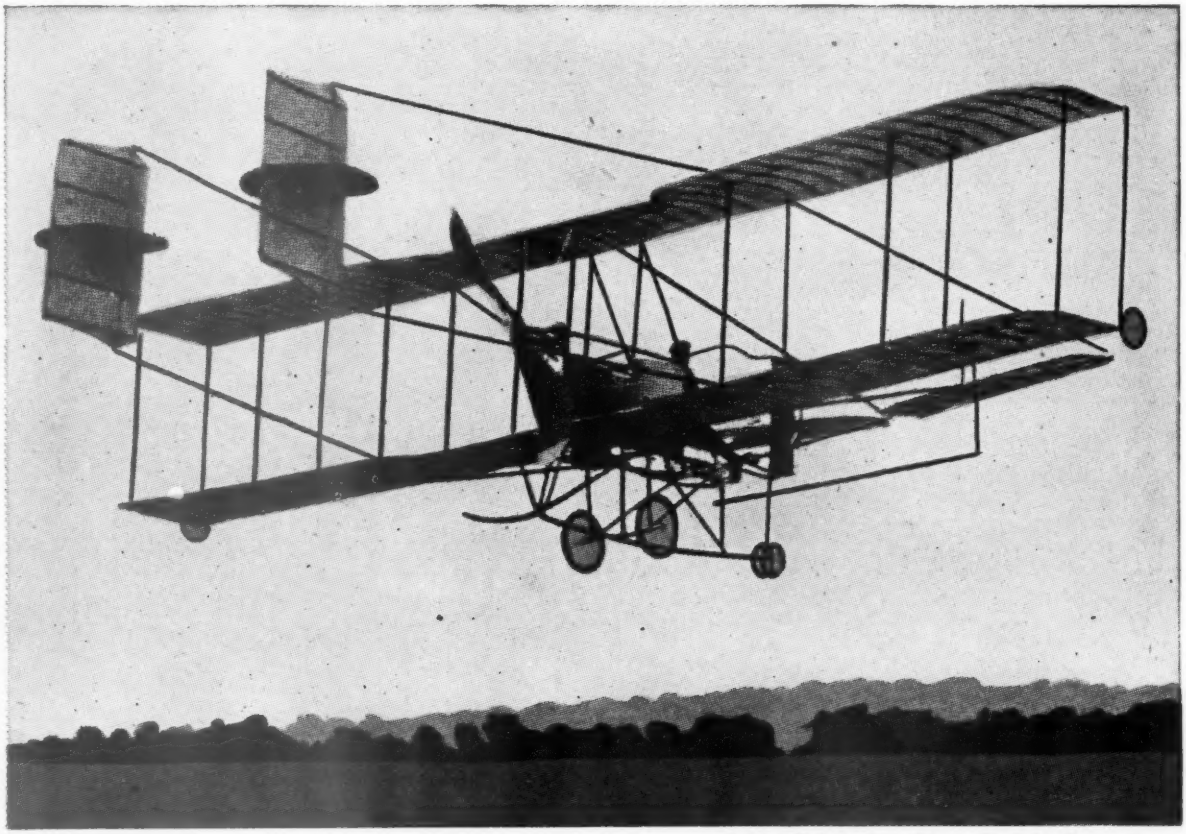
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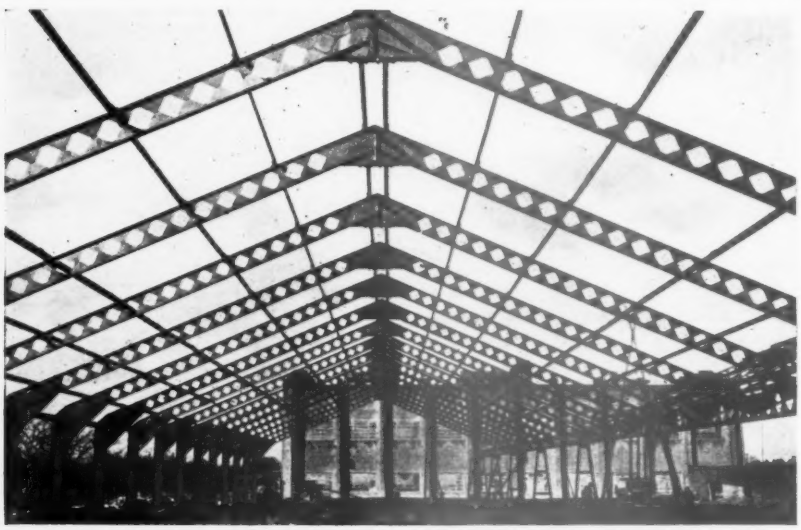
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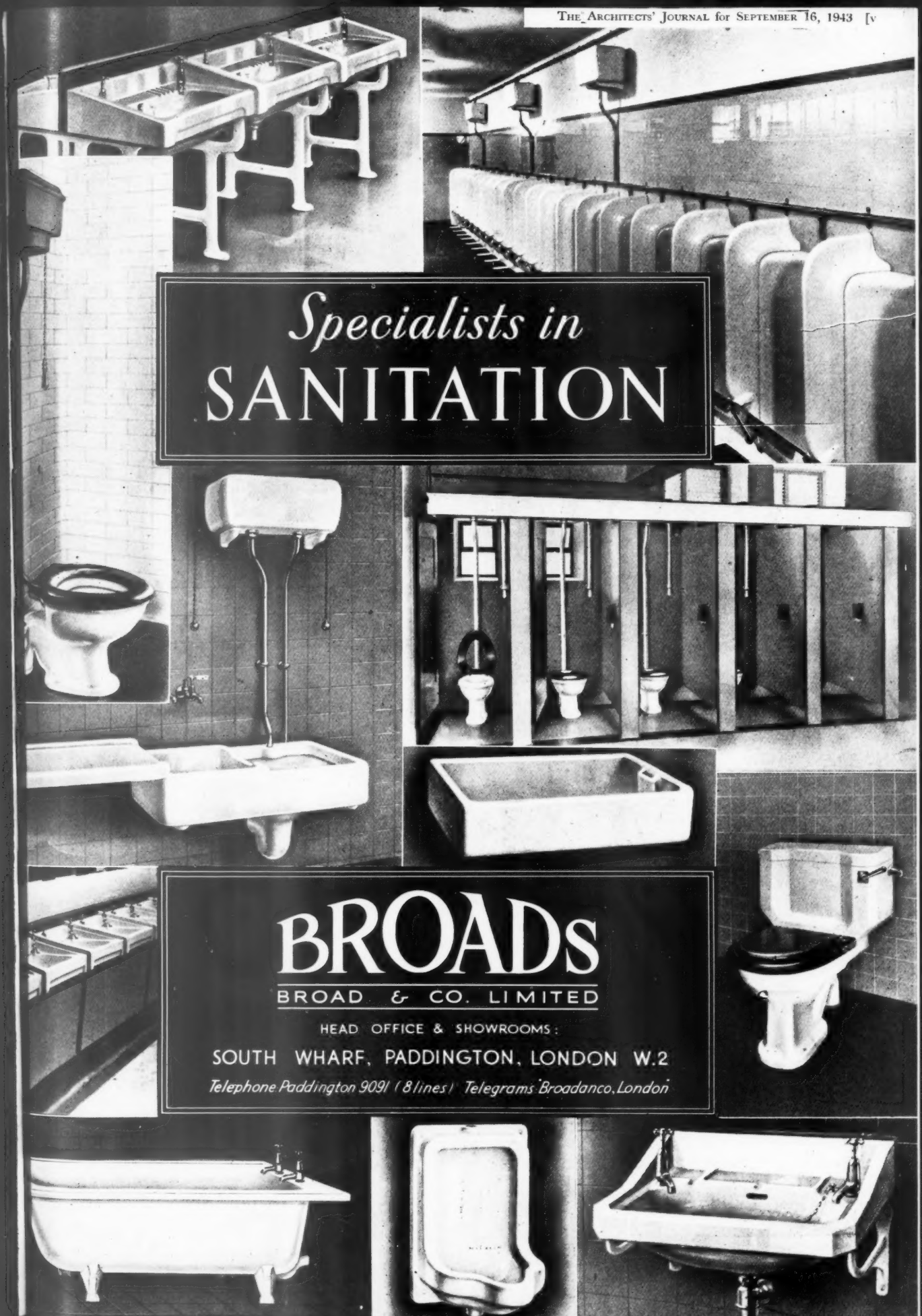
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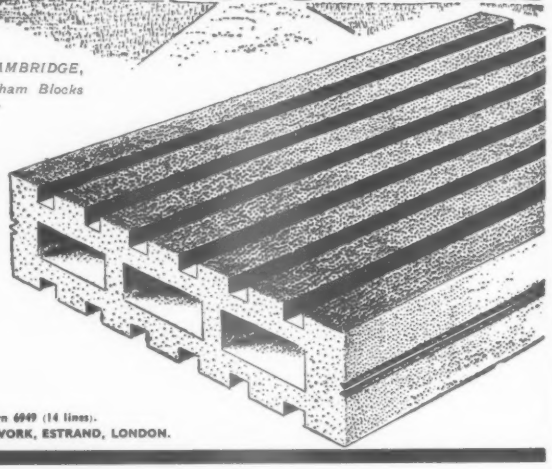
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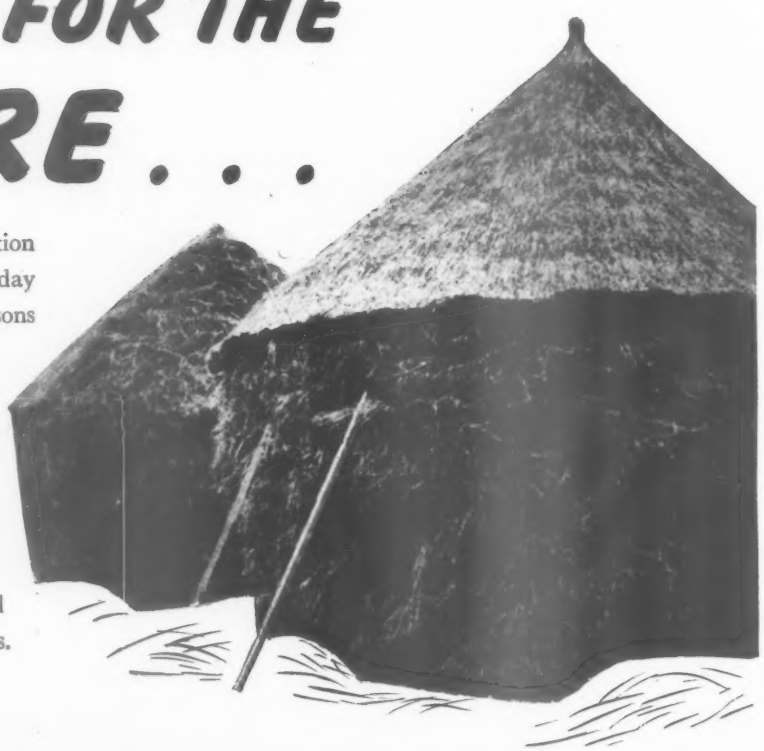
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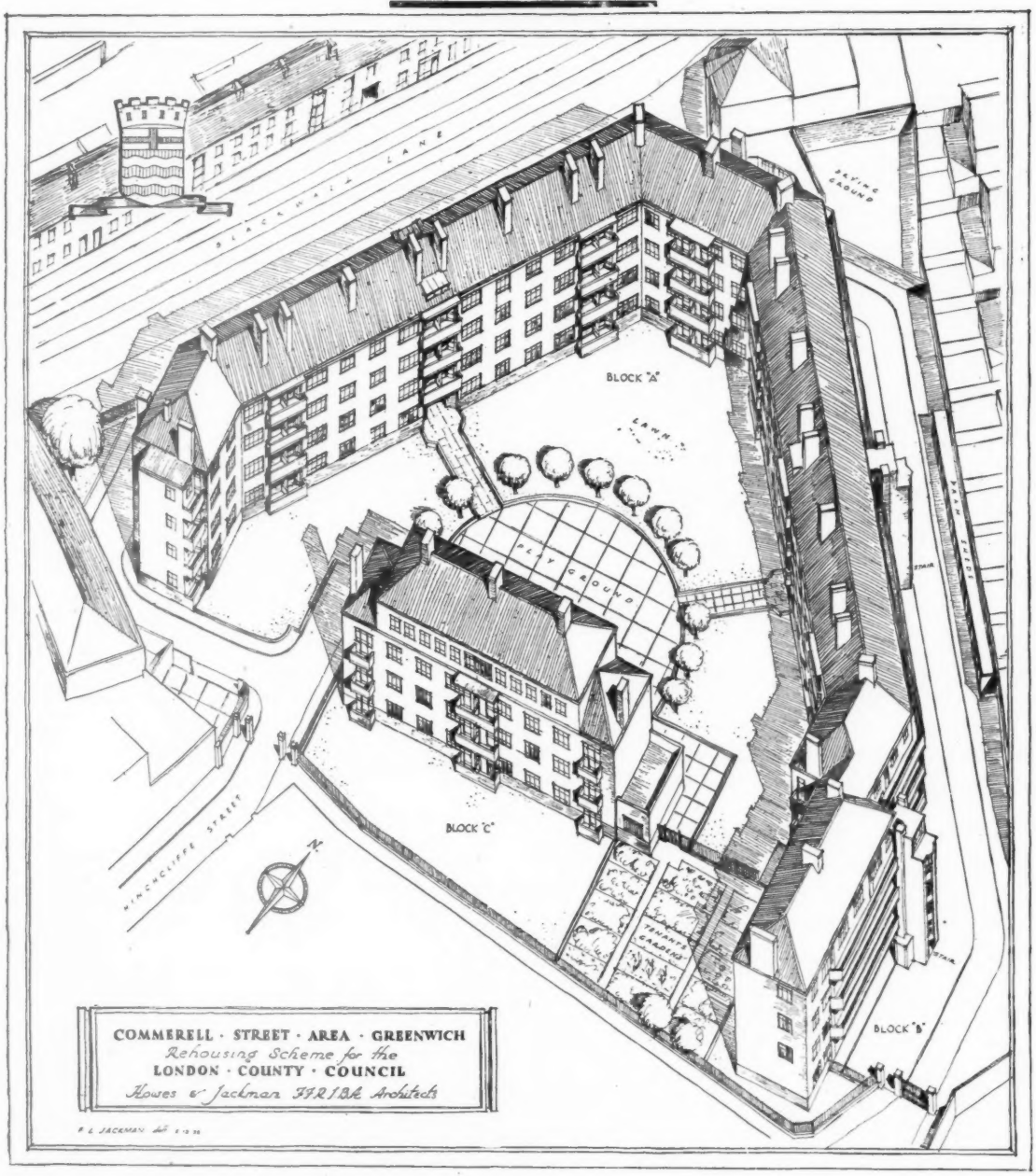


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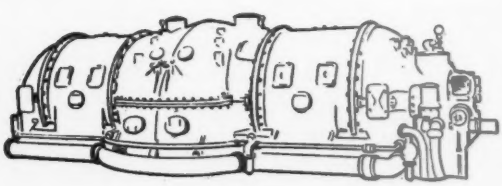
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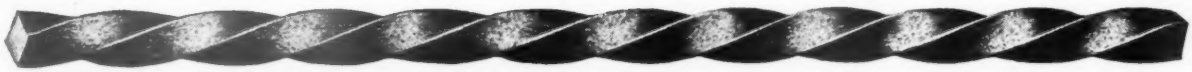
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There is, of course, the question of using short-supply timber for the temporary shuttering. But if the structure is planned and designed with a repetition of parts and sizes, a small amount of timber can be used many times over. More particularly if the major structural elements are pre-cast as well as the smaller building details. To obtain the maximum advantage from pre-casting the weights of each unit must be reduced to a minimum. This can only be done if a high *strength* steel requiring smaller size rods is utilised.

And thus, the employment of scientifically twisted Square-Grip *work-hardened* steel Reinforcement results not only in a saving in steel weights, but indirectly to a saving in timber.

IN A WORD

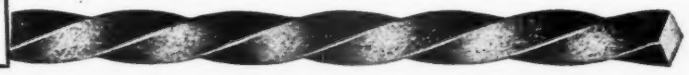
. . . this is how SQUARE GRIP reinforcement saves the nation's valuable steel. Take, for example, a building of conventional steel construction that requires 1,500 tons of steel. Concrete reinforced by ordinary mild steel round bars would need 1,125 tons of steel while concrete reinforced by Square Grip rods would only require 675 tons of steel.

. . . and this is because Square Grip rods, compared with mild-steel round bars, have a working tensile strength 50% greater than mild steel and a bond resistance many times more efficient than plain round bars.

Full technical data supporting these claims supplied on request.

THE SQUARE GRIP REINFORCEMENT COMPANY LIMITED

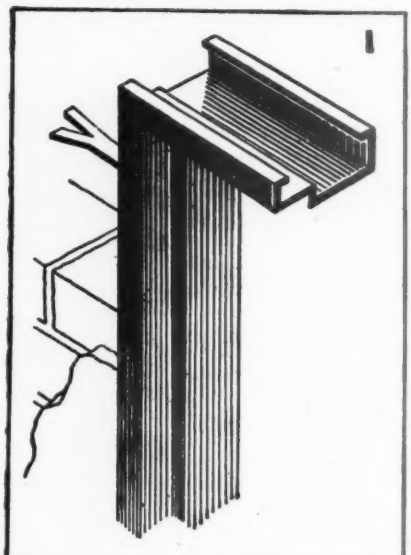
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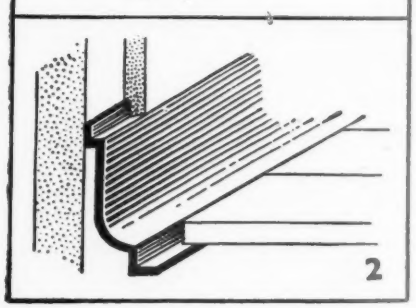


STEEL INSTEAD OF WOOD



Sankey METAL TRIM



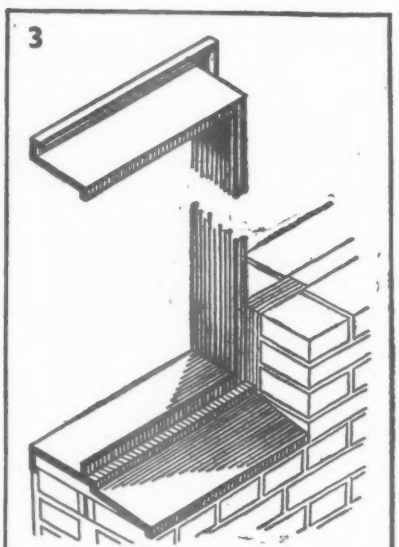


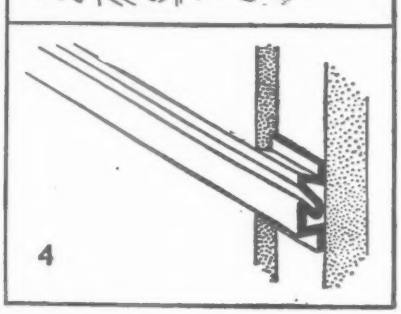
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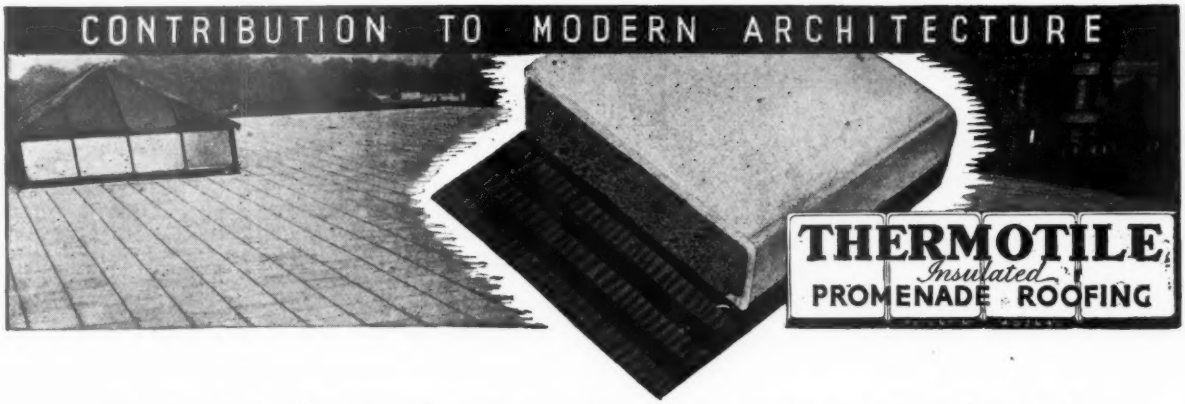


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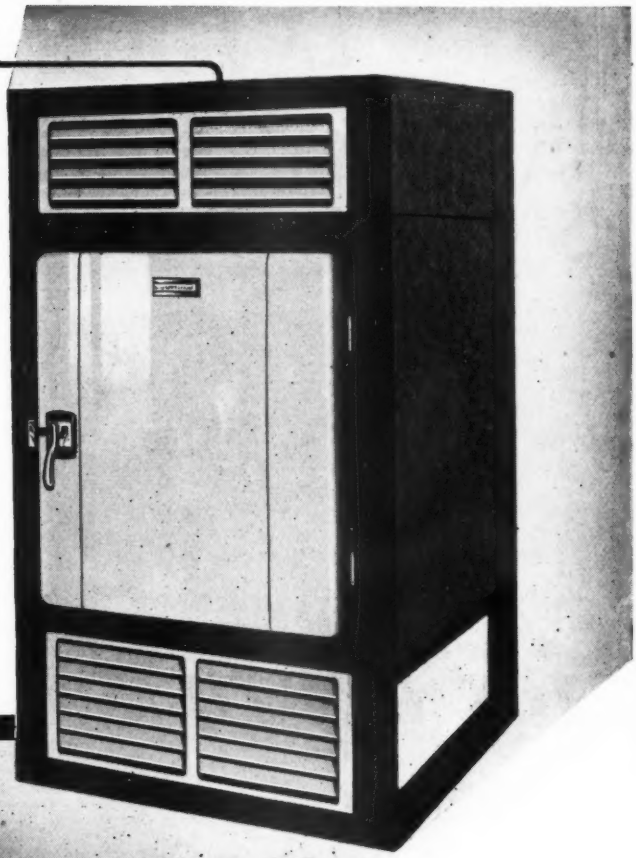
Caught – and held

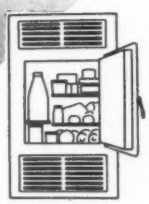
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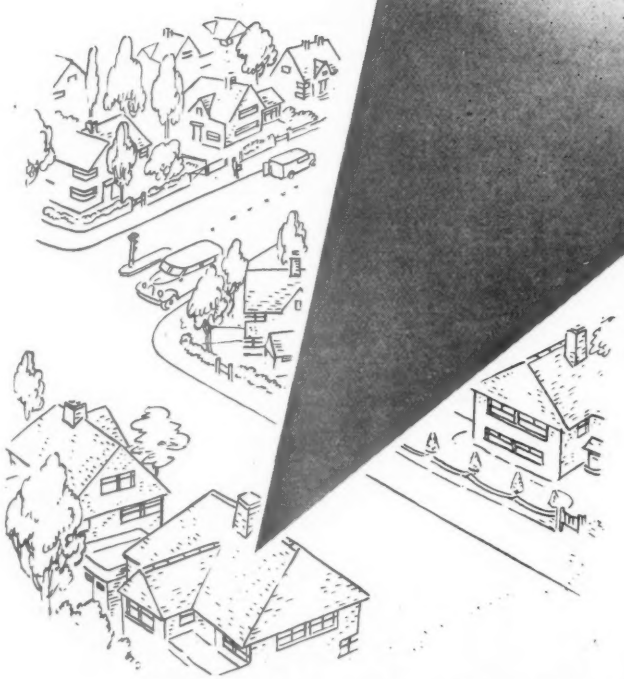
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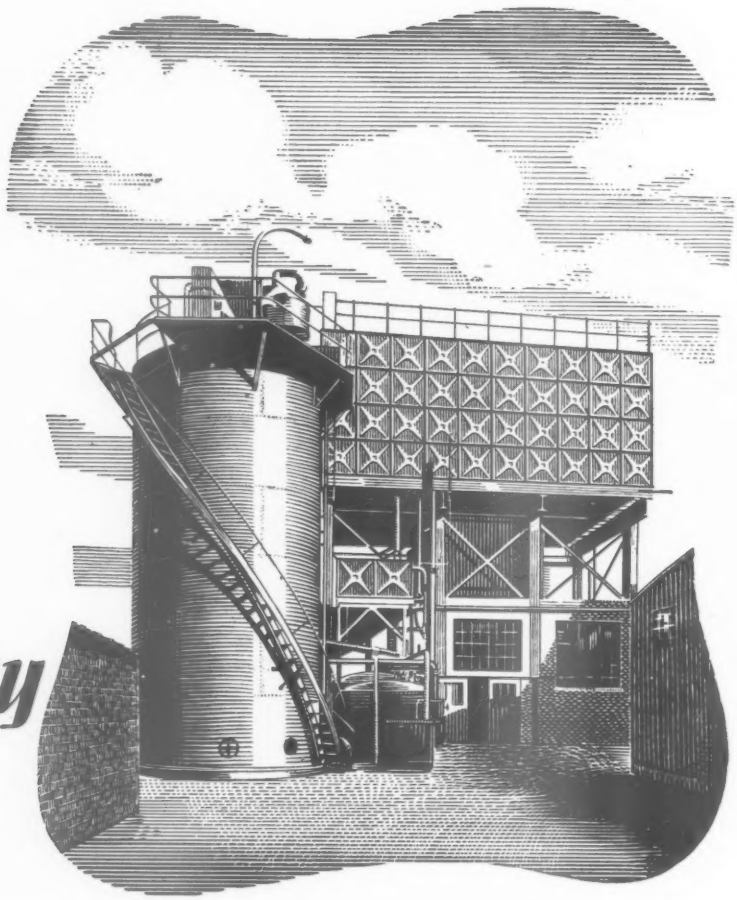
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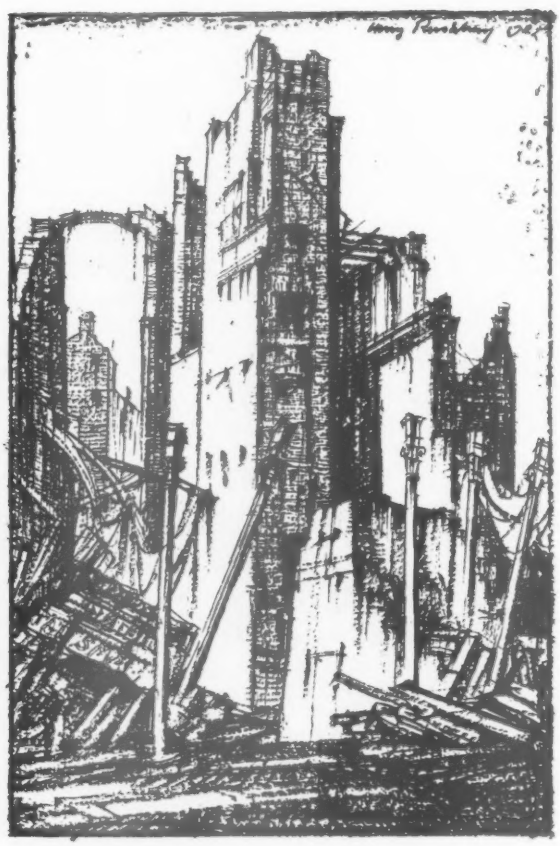
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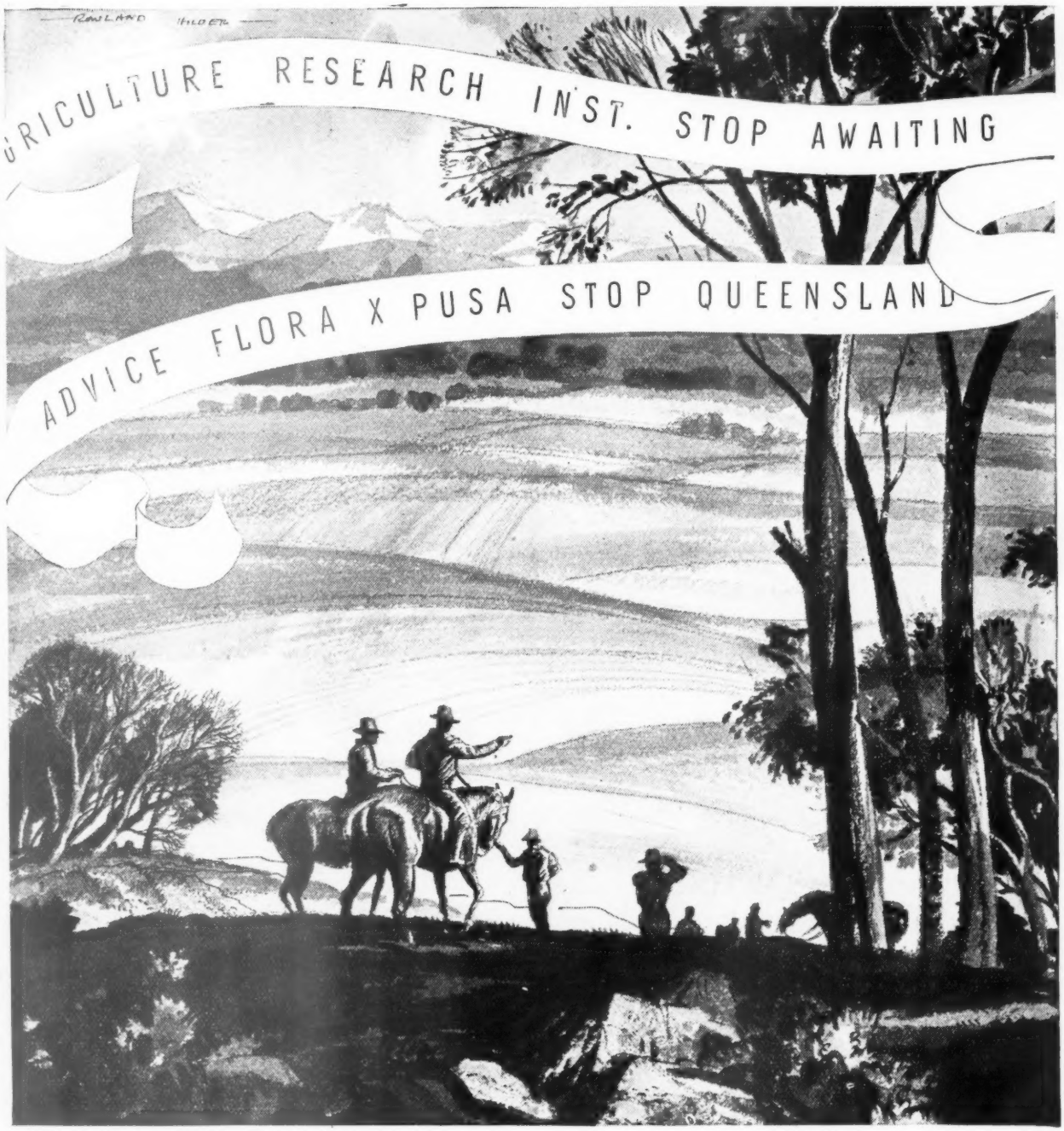
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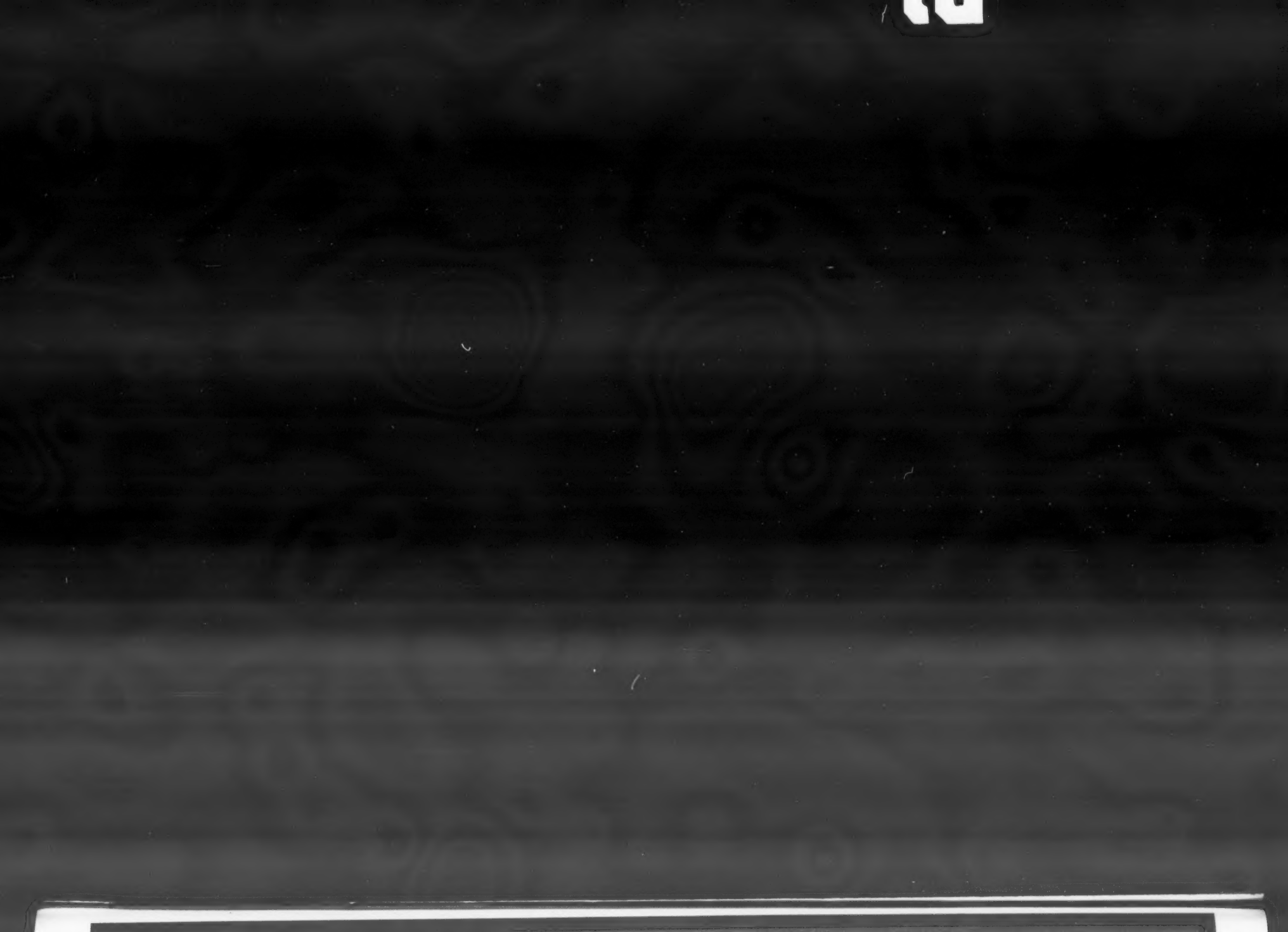
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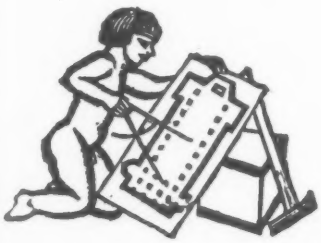
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DIARY FOR SEPTEMBER OCTOBER AND NOVEMBER

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by their initials as given in the glossary of abbreviations on the front cover.

BOURNEMOUTH. *TCPA Conference.* OCT. 2

BRISTOL. *Rebuilding Britain Exhibition.* At the Art Gallery. (Sponsor, CEMA). SEPT. 16 to OCT. 6

DERBY. *Recording Britain Exhibition.* At the Art Gallery. (Sponsor, CEMA). SEPT. 16-25

EXETER. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) OCT. 18 to NOV. 8

HYDE. *Englishman Builds Exhibition.* At Bayley Park, Hyde Park. (Sponsor, BIAE.) SEPT. 25-OCT. 9

LONDON. *Recording Britain Exhibiton.* At National Gallery, Trafalgar Square. Third and final exhibition of selected drawings under the *Scheme for a Record of Changing Britain.* (Sponsor, MOLNS and Pilgrim Trust). SEPT. 16-30

Arthur Ling. *The New Plan for London.* At Westminster Hospital Medical School, Horseferry Road, S.W.1. Mr. Ling, who has worked continuously on the scheme since its inception, will illustrate his talk with lantern slides, discussion. (Sponsor, Westminster Branch ABT). Non-members invited. Nominal charge for admission. 6.30 p.m. SEPT. 17

Homes to Live in Exhibition. At Geffrye Museum, Kingsland Road, E.2. (Sponsor, CEMA). SEPT. 18 to OCT. 2

County of London Plan Exhibition. At RA, Burlington House, Piccadilly, W. NOV. 3 to DEC. 1

LONGSDON. *Homes to Live in Exhibition.* At the Women's Institute. (Sponsor, BIAE.) SEPT. 16 to 21

MANSFIELD. *Design in the Home Exhibition.* At the Art Gallery. (Sponsor, CEMA). SEPT. 16 to 18

MERTHYR TYDFIL. *Recording Britain Exhibition.* At Cyfarthfa Castle Museum. (Sponsor, CEMA). SEPT. 18 to OCT. 11

MIDDLESBROUGH. *When We Build Again Exhibition.* SEPT. 18-25

Conference on Planning for Living. At Grange Road Hall, Middlesbrough. Alfred Edwards, M.P. for Middlesbrough East, is taking an active part in the organisation of the conference. The Mayor of Middlesbrough has been invited to attend and welcome the delegates. F. J. Osborn, Hon. Secretary of TCPA, the principal speaker at the morning session, will outline a programme for a National Planning Policy. Mrs. Jean Mann, former Chief Magistrate of Glasgow and Max Lock, Director of the Hull Regional Survey, will deal with aspects of the problems involved in replanning industrial cities. TCPA, in consultation with other bodies, has worked out a set of key principles in its National Planning Basis, as a platform for action when the time comes, and for preparation beforehand. The purpose of the Middlesbrough conference is to crystallise opinion on a policy having these broad objects, to ensure its application, and to discuss what can be done to get it better understood and accepted by the public. The exhibition *When We Build Again* is being shown at the Hall from September 18 till September 25. It includes a large scale model of a new town, prepared by Cadbury Bros., in conjunction with TCPA. SEPT. 21

NOTTINGHAM. *Englishman Builds Exhibition.* (Sponsor, CEMA.) SEPT. 16 to 18

SHEFFIELD. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) APRIL 4-25, 1944

SKIPTON. *Town and Country Life in the Reign of King George III Exhibition.* At the Art School. (Sponsor, CEMA). SEPT. 16-18

SOUTHAMPTON. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) JAN. 28 to FEB. 18, 1944

STOKE-ON-TRENT. *When We Build Again Exhibition.* OCT. 18-23

TCPA Conference. OCT. 23

SWANSEA. *Rebuilding Britain Exhibition.* (Sponsor, RIBA.) NOV. 20 to DEC. 11

Living in Cities Exhibition. At Deffett Francis Art Gallery. (Sponsor, CEMA). SEPT. 16 to OCT. 9

WAKEFIELD. *Design in the Home Exhibition.* At the City Art Gallery. (Sponsor, CEMA). SEPT. 25 to OCT. 16

WARRINGTON. *Living in Cities Exhibition.* At Museum and Art Gallery, Bold Street. (Sponsor, BIAE.) SEPT. 25 to OCT. 9

WELWYN GARDEN CITY. *TCPA Conference.* 11 a.m. to 5 p.m. Mrs. Nicholl, Chairman of the Urban District Council, will welcome the delegates. Sir Theodore Chambers, Chairman of Welwyn Garden City, will also be present. The party will be conducted round the city. Speakers: F. J. Osborn, W. F. Eccles and R. L. Rice. Subjects will include the general aspects of planning and the planning and development of Welwyn. (Sponsor, TCPA.) SEPT. 18

NEWS

THURSDAY, SEPTEMBER 16, 1943
No. 2538. VOL. 98

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Though no feature in the JOURNAL *is without value for someone, there are often good reasons why certain news calls for special emphasis. The* JOURNAL'S *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

★ *means spare a second for this it will probably be worth it.*

★★ *means important news, for reasons which may or may not be obvious.*
Any feature marked with more than two stars is very big building news indeed.

The War Damage Commission notifies the following transfers and appointment of REGIONAL MANAGERS.

Mr. R. G. Townend, from the N.E. London Region to the North-Eastern Region, Leeds. Mr. V. P. O'Connor, from head office to the N.E. London Region. Mr. A. R. Farlan, from the S.E. London Region to the S.W. London Region. Mr. H. E. Gibbs, from the Midland Region, Birmingham, to the S.E. London Region. Mr. A. W. Arundale, from head office to the Midland Region, Birmingham.

It is of the utmost importance that the least possible amount of timber should be wasted at the present time. One source of waste is the DETERIORATION OF SAWN TIMBER during seasoning.

This, says TDA, can be alleviated by chemical seasoning, which has proved itself in America. The association has interested itself in the method, and is organizing chemical tests in this country. In the meantime it has prepared a booklet giving details of the principles of chemical seasoning and its practical application. Copies can be obtained from TDA.

BIG jobs and *Little*



Though we are today the largest scaffolding organisation in the country, we still remember that 30 years ago we were very 'small fry.' In 1913 we invented tubular steel scaffolding and in those early pioneer days the little jobs were quite gratefully undertaken . . . they were very important to us then, they are still very 'important' to us today. We give to the little job the same care and attention to detail as we give to the big job . . . and we always will.

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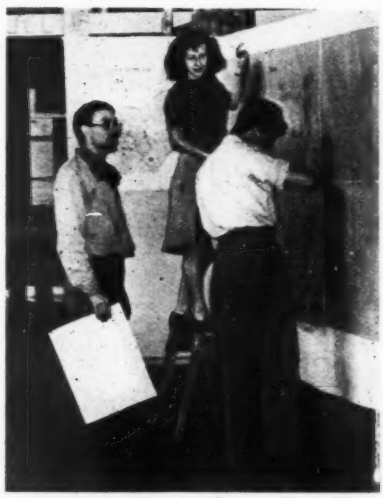
DESIRABLE RESIDENCES: MR. BERNARD CLARK'S. [*From* The Young Visitors, *by Daisy Ashford*]. I have given the best spare room to Miss Monticue, said Bernard with a gallant bow, and yours, turning to Mr. Salteena, opens out of it so you will be nice and friendly both the rooms have big windows and a handsome view. How charming said Ethel. Yes well let us go up replied Bernard and he led the way up many a winding stairway till they came to an oak door with some lovly swans and bull rushes painted on it. Here we are he cried gaily. Ethels room was indeed a handsome compartment with purple silk curtains and a 4 post bed draped with the same shade. The toilit set was white and mouve and there were some violets in costly varse. Oh I say cried Ethel in supprise. I am glad you like it said Bernard and here we have yours Alf. He opened the dividing doors and portrayed a smaller but dainty room all in pale yellow and wild primroses. My own room is next the bathroom said Bernard it is decerated dark red as I have somber tastes. The bathroom has got a tip up bason and a hose thing for washing your head. A good notion said Mr. Salteena who was secretly getting jellus.

Over two hundred town planning officers attended the SUMMER SCHOOL OF THE TPI held at Birmingham University.

The great Hall of the University was devoted to what was perhaps the largest exhibition of town planning survey which has ever been held in this country. In addition to the Hull survey there were Oxenbury's survey of East Suffolk, work of the West Midland group, Payne's survey of Gloucestershire, maps and a war-time regional survey scheme of the Association for Planning and Regional Reconstruction, maps from the Ministry of Town and Country Planning and from the Schools of Architecture.

Last month the Committee of the Southern Section of ARCH.S.A., MET AT THE RIBA.

The committee, consisting of representatives from most of the schools of architecture in the South of England, discussed the activities of the Section during the forthcoming academic year, and welcomed representatives from the Welsh School of Architecture, and the Department of Architecture, S.W. Essex Technical College, which are about to become member-Centres of the ARCH.S.A. A further section of the Association was created in April of this year, known as the International Section. The committee of this new section consists of British and foreign architectural students now in this country, and corresponding-members have been invited from the United Nations and from friendly neutral countries. A student of the Stockholm Technical College School of Architecture is the first corresponding-member to be elected on to the Committee. The Committee is empowered to establish contact with foreign architectural students in order that they might become members of the International Section; to plan the organization of the post-war activities of the ARCH.S.A. in the international field and to propagate the Aims of the Association in the international field.



Putting the finishing touches to the exhibition at the TPI Summer School at Birmingham.

★

At Bow Street Police Court on September 3, Mr. P. Granville-Grossman appeared to answer a CHARGE OF PRODUCING FALSE EVIDENCE in support of his application for admission to the Register.

The presiding magistrate was Mr. J. B. Sandbach, K.C. Mr. Curtis Bennett prosecuted on behalf of the Registration Council, Mr. A. E. Jennings defended. Defendant pleaded guilty. Opening the case Mr. Curtis Bennett said that defendant had filled up and sent to the Registration Council a form setting out his alleged qualifications as an architect, and certifying that the accompanying plans were those of buildings designed by himself for clients, and that the drawings were by his own hand. But when this application came before the Admission Committee it so happened that the Chairman, Mr. Vincent Burr, recognized some of them as his own work. Enquiries were made in consequence, and it proved that—excepting two cases where there was no evidence—the drawings submitted were not in any case the work of Mr. P. Granville-Grossman. The Registration Council considered the case an extremely bad one. It was the first under this particular section of the Act. There were no previous convictions against the defendant. Mr. Jennings said that in 1910 the defendant was employed in Belfast in an architect's office, looking upon architecture as his ultimate career. But in 1914 the war broke out, and for four years he served in the army obtaining a com-



At the Architectural Students' Association—Southern Section Committee Meeting at the R.I.B.A. Left to right: Peter Shaw Parkinson (S.W. Essex Tech. College—Arch. Dept.), David Haydn Richards (Welsh School of Arch.), W. Warne John (Welsh School of Arch.), John Beloff (A.A.), Donald Barron (Bartlett), P. S. Bolland (Manchester University—Publicity Sec.), Miss Selina Maltby (A.A.), Hugh Duckett (R.W.A. School of Arch., Bristol).









MOW's Mission to USA

MOW's mission of inquiry into American building methods arrived in USA last week. Its members, seen in the photographs, are, from left to right, Alfred Bossom, M.P., Sir G. Burt (chairman of the Building Research Board), Sir James West (chief architect to MOW) and Frank Wolstencroft (secretary of the Associated Society of Woodworkers). Alfred Bossom, Conservative Member of Parliament for Maidstone, practised for 23 years in America as an architect, and carried out many big building projects. Sir James West has devoted the last two years to preparations for post-war building; and Sir George Burt, as chairman of an inter-departmental committee, has been collecting ideas on houses and flats. Frank Wolstencroft, chairman last year of the TUC, has been general secretary of the Amalgamated Society of Woodworkers since 1925. He has already been to the United States this year, "to seek harmonious working relationships with American organized labour." It is clear from the terms of the initial announcement in the House of Commons that Lord Portal has instructed the mission that its paramount consideration must be to gather information that will help to reduce building costs in this country after the war. Directly the mission was announced, experts at MOW started to compile a dossier indicating not only what they want to know about American methods, but what we have to tell America. See leading article on the facing page.

mission. When he returned to civil life he was an older man and not able to prepare for the profession he had hoped would be his. Subsequently he had become interested in speculative building in a large way, and had employed architects to prepare plans. His explanation for seeking to become registered was that he might have the privileges of being an architect. It was pure vanity and nothing else. He would not have acted as an architect. Mr. Sandbach: Mr. Curtis Bennett puts his case forward as a serious one, and I am bound to say I agree with him. The architectural profession is naturally anxious to keep a hold, and a tight hold, on those people who desire to enter it. Architecture is an honourable profession, and it is important to the public that only those people who are properly qualified, and capable of looking after and providing for the comfort and business of the public in their homes—that the profession should be confined to people like that. Here is a man, a speculative builder, who not only tries to get into a profession for which he is

not qualified, but makes a barefaced and almost impudent forgery. He takes another properly qualified man's work, takes a tracing and puts his name to it. If that is not fraudulent it is first cousin to it. But for a happy circumstance he might have succeeded. The President of the Selection Committee must have been rather astonished to see some of his own work under another name, and but for this happy fact I have no doubt this defendant would have been describing himself as an architect, and probably holding himself out to practise as such. A fine was imposed of £34 5s. with £15 15s. costs.

★

Lord Latham, Leader of the LCC, complained of the SUSTAINED GOVERNMENT DELAY in giving planning authorities the necessary powers to carry out their plans.

Lord Latham was speaking at a luncheon given by the chairman of the City of London Improvements and Town Planning Committee, Mr. C. W. Dennis, at Guildhall House. The City Corporation, the LCC, and all other planning authorities are a little dismayed, to put it mildly, at the delay, Lord Latham said. It is over two years since the Government, through the then responsible Minister, Lord Reith, stated that they accepted the two urgent recommendations of the interim Uthwatt report. That this delay should have followed is incomprehensible. We have been told over 12 months ago that draft legislation is in existence to deal with those two main aspects of planning, as well as with others only slightly less important. Personally he made no complaint against the present Minister ; he rather sympathized with him. He felt that there must be influences at work that are frustrating the Minister's endeavours to put that essential legislation on the Statute-book. We are encouraged by our incomparable Prime Minister to think that Basic English was so important that a committee of his Cabinet had been considering it, Lord Latham continued. Planning authorities are more concerned about a Basic England than a basic language. That basic England must be planned on the footing that it is to be a healthy, convenient, fine, and noble England.

Mr. Lawrence Tanner, Keeper of the Muniments of the Abbey, said, in a holiday lecture, that in the new London County Plan WESTMINSTER ABBEY WILL STAND IN A SUPERB SETTING as the centre of Westminster and the Empire.

It is very curious and interesting, he said, to see that in the scheme for replanning London recently put forth by London County Council one of the suggestions is that, coming from Victoria Station, Victoria Street will be cut short at the Army and Navy Stores, and traffic diverted to the left and right, thus leaving an area of comparative peace, with the Abbey as its centre, into which only traffic bound for the locality itself will be admitted. If this most desirable scheme should materialize the wheel will have come full circle. Once again the main approach to the Abbey Church, from the west, will be, as it was for centuries, by way of Tothill Street, and once again the Abbey, the Palace, and the school will be set in a sanctuary on a new isle of Thorney, not indeed surrounded by streams of water, but by streams of traffic which will pass it by, and leave it in a superb setting.

VOYAGE OF DISCOVERY

MOW'S mission to the USA will probably have started work in New York and Washington, D.C.—its two most likely headquarters—by the time this is in print. A difficult task faces these men—Alfred Bossom, Sir George Burt, Sir James West, Frank Wolstencroft, and their two technical assistants, one of whom is a costing officer—for they have to obtain the greatest possible amount of information in the shortest possible time.

It is clear from the terms of the initial announcement in the House of Commons that Lord Portal has instructed the mission that its paramount consideration must be to gather information that will help to reduce building costs in this country after the war. But the sending of this mission is not the end of the research work MOW intends to carry out in the US.

Experts at MOW prepared a dossier for the mission setting forth details not only of what they want to know about American methods, but what we have to tell America. The preparation of this dossier is in itself invaluable to the Government, for it summarises indications of lines on which research might well be undertaken in this country as well as the States.

There are more ways than one of reducing building costs, and lowering wages is not one of them. In fact the mission will try no doubt to solve that enigma—how is it that American operatives are, so it is said, paid three times as much as British operatives, while the cost of building in the States is not more than 25% higher (at par) than it is here?

The most likely leads will be found by investigating such aspects of building as management, organisation, progressing, new constructional ideas with old materials, use of new materials, prefabrication—or pre-assembly as MOW now prefers to call it—and functional design.

The mission will take with it detailed costing analyses of typical 1939 houses and attempt to obtain an American comparison—housing being the biggest building problem we shall have to consider.

It will probably be found that the Americans spend more on the equipment of the home than we do. How does this bear on costs generally—what compensatory reduction is made to enable the equipment to be installed at a not much greater overall cost? Such are the questions to which the mission will attempt to find answers.

At the same time, of course, the knowledge gained by the members through their association with the investigations of the Post-war Building Directorate will lead them to investigate American opinion of the First Draft Reports of its Study Committees.

Then the relationship between the many sections of the industry must be investigated. What effect do these relation-

ships have upon the cost of building and how do they compare with the like relationships over here? How do the Americans use Registered Architects? How are the National Building Codes administered and are they really effective? Then, how does the American contractor organise his office? These are questions that should be put by the mission and no doubt will be put.

In brief, if it is well organised, the mission will (a) collect information on these points and form views; (b) make the contacts that will enable it to secure information by correspondence on points that arise during its trip; (c) indicate the direction (geographically and technically) in which further missions or individuals should be sent; and (d) the mission will end by preparing a report and recommendations that should be realistic and useful not only to MOW but to the building industries generally. We hope that this report will eventually be published.



The Architects' Journal

War Address: 45, The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9

NOTES & TOPICS

MOW'S BUILDING MISSION

MOW's building mission to the USA is probably hard at work in New York by now, investigating American methods in the hope that it will find the means of reducing post-war building costs.

★

It is good to know that one of the problems it hopes to solve is the enigma—why can the Americans pay their operatives three times as much as we pay ours, and yet not increase the total cost of building proportionately? The labourer is worthy of his hire, and all technical men will sympathize with the retort courteously given by the plumber of history.

★

This plumber had been called in by a firm who had a dent in a boiler and wanted the dent straightened out. The plumber arrived, stalked round the boiler, examined it carefully, gave it one crack with his hammer and left. A few days later the firm received from him a bill for £5. Thinking this an excessive charge, they asked him to present a detailed account. By return post he sent in a revised account which read:

	£	s.	d.
To straightening out dent in boiler			6
To knowing where to hit ..	4	19	6
Total	£5	0	0

WHEN WE BUILD AGAIN IN HULL

The young lady near the entrance to the Hull exhibition told me that I was the one thousand seven hundred and thirty-first visitor—in two days. Presumably not counting the invited (and uninvited gate-crashers) for tea and buns, and the usual flash-light photograph of the self-conscious platform two days earlier.

★

The spectators were of several minds. The appreciative: "Look, the children can get to the Nursery School without crossing a traffic road." The sceptical: "My dear, do you think that any of this will ever materialize?" And the baffled: "It takes a bit of following."

★

The show was supplemented by contributions from the City Architect's and Engineer's departments of the Corporation. The latter displayed maps of what it *was* proposed to do with Hull: All the main roads zoned for shops, a vast depth of land bounding the river; Hull zoned for industry; and housing for over a MILLION scattered for miles around.

★

Small wonder Professor Abercrombie said in his high-speed opening speech, "Town Planning is in its infancy."

RECORDING BRITAIN

In the third and final exhibition of selected drawings produced under the *Scheme for a Record of Changing Britain*, now at the National Gallery, perhaps the most interesting contributions and certainly the largest in number shown by one artist, are those of Barbara Jones. On the next page you see one of her sketches of a curious little summer house in the garden of Marlborough House, Falmouth, containing, in one glorious stew, Egyptian, Greek, Roman, Gothic and Chinese motifs.

★

The other sketch, by G.W. Hooper, is of the Clayton Tomb in Bletchingley Church, Surrey. It dates from the first decade of the eighteenth century. It is signed by the sculptor, Richard Crutcher, Master of the Masons' Company in 1713, and was erected by Sir Robert Clayton, second founder of St. Thomas's Hospital, to his wife.

★

Since the initiation of the scheme about 1,500 drawings by nearly a hundred artists have been produced and accepted.

★

One result of the scheme is the fortuitous—and fortunate—rise of a new school of architectural draughtsmen—something we have lacked for three generations. Let us hope that MOLNS and the Pilgrim Trust will continue after the war to patronize those artists who are willing

and able, each in his own individual manner, to preserve on paper what is interesting, beautiful or unique in the buildings of the past.

DEPARTMENT OF *Haute Couture*

Diplomats, we are told, will be, like everything else, different after the war. Not, of course, by means of plastics or prefabrication, but merely by a thickening of the social strata from which recruits are drawn and by a coarsening perhaps of the rarefied atmosphere which diplomats are traditionally accustomed to breathe.

★

If then the Government proposals for the reform of the service are implemented, the post-war diplomat will be a man of the WORLD, to whom the initials H.E. stand quite as often for High Explosive as they do for His Excellency. He will be a man not given to surprise at such an unusual situation as that, for instance, which recently caused such well-bred confusion in the chancery of one of our Near East embassies.

★

It occurred, according to our Diplomatic Correspondent, at a time when the staff was about to move into newly-built premises. The HMOW official in charge of the arrangements discovered that the skirtings of the new building—designed by his department—were coved in the contemporary manner and that therefore the official furniture would not stand becomingly against the wall. The news was flashed home. Back came the message (through the usual diplomatic channels), terse, instructive, but to non-architecturally minded attachés (it appears), highly suspicious. "Cut the skirtings," it commanded, " to fit the bottoms."

GLASS HOUSES ?

A piece of information coming from the United States about a new material should be especially interesting to those experimenting in revolutionary methods of house building. A new type of cellular glass for outside walls is being produced by the Pittsburgh-Corning Glass Company. It is made in slabs filled with small bubbles of carbon dioxide, which provide an insulating value equal to that of cork. A two-inch thickness is said to give better insulation than a twelve-inch brick wall.

★

Research workers at the John B. Pierce Foundation say the material looks promising. It is light enough to float in water; it is non-combustible; it will last indefinitely; it is impervious to water and water vapour; it is not transparent, nor, presumably, even translucent; with a surface finish it may provide better walls at a lower cost. ASTRAGAL





At the Recording Britain *Exhibition at the National Gallery. Left, Summer House at Marlborough House, Falmouth, by Barbara Jones. Right, the Clayton Tomb at Bletchingley Church, Surrey, by G. W. Hooper. See Astragal's note and pages 176 and 178 of last week's issue of the* JOURNAL.



LETTERS

H. Meyer.

Dr. Hajnal-Kónyi, M.I.Struct.E.

Continuity in Construction

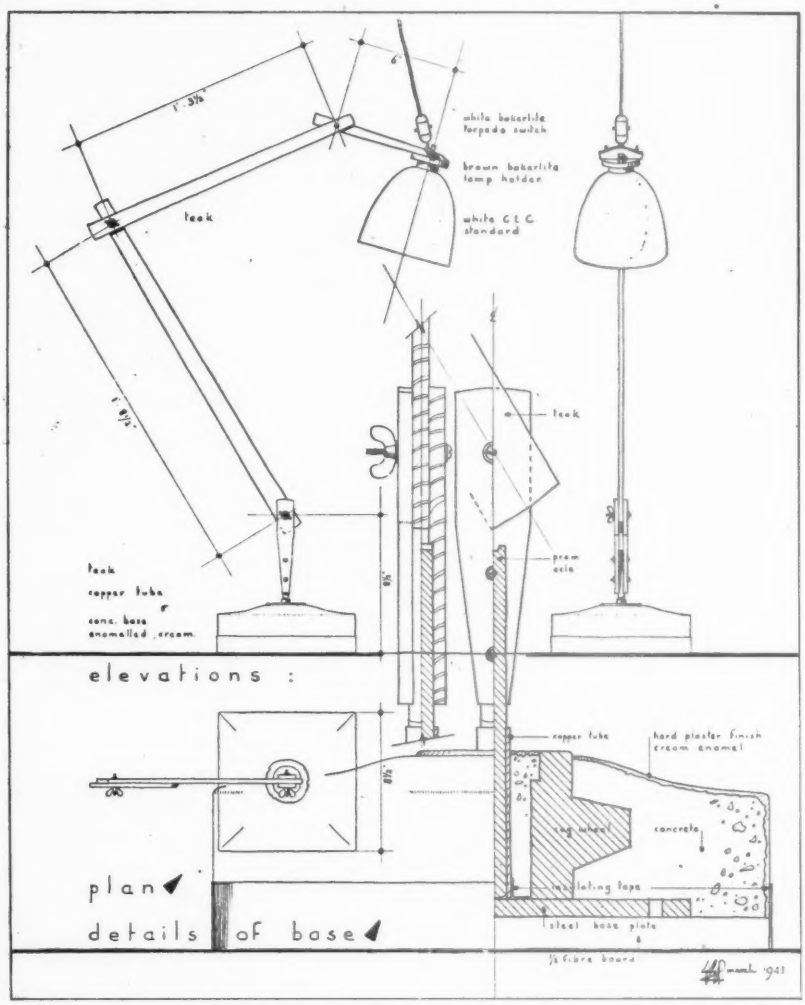
SIR,—I read Dr. Hajnal-Kónyi's letter on continuity in steel design and especially his analysis from *encastré* beam to double cantilever with extreme interest. There is a great deal of doubt as to the efficiency of riveted joints, even of the type illustrated, when it comes to considering their producing continuity, but since a modern structure of the Antwerp type would probably now be entirely welded, the question of continuity in design, so ably outlined in the recent article, remains the real point at issue.

I believe that quite beside the lack of interest on the part of the firm supplying the steelwork and the inability of many commercial designers to give sufficient care to the more complicated design, that there are other reasons handicapping the more universal employment of continuous structures, and the illustrated machine shop offers a good example.

When in peacetime comparisons in cost were possible, labour costs were high and the actual steel price relatively low, when set against continental conditions. Now, with the cost of welded fabrication per ton at least 10 per cent. higher than the riveted and, in our case, an admitted further 10 per cent. increase in weight for the two-pin frame design, the conventional methods not only seem to possess virtues of economy, which will only very rarely be outweighed by the increase in cost of foundations, but also offer some positive advantages which I consider worth setting out. The two comparisons of the single-storey buildings do not appear to be entirely fair. The recommended minimum slope for asbestos is 22½ or 25 degrees; if the conventional design had had that slope, and if the bottom tie had been given a rise of, say, 2 ft. (as illustrated), it would have looked neater and possibly would have been lighter; in contrast, the two-pin frame design would require modification if, with Trafford tiles only, it would have attempted the same degree of weather proofing.

It would, in my opinion, not be possible to evolve a design of a rigid frame structure if

ARCHITECT'S DESK LAMP MADE AT HOME





This adjustable lamp was designed and made by an architect at home for his own use. It will rotate horizontally through a complete circle and vertically infinite adjustment is possible; it can be taken to pieces for packing. The heavy base is of concrete cast in a biscuit tin and reinforced with copper wire. When thoroughly dry, the base was given a slurry of a proprietary brand of hard setting pure white alabaster cement, rubbed smooth with sandpaper, and finished with cream enamel. Waxed teak was used for the arms, which were shaped for æsthetic and weight-reducing reasons. The various junctions were fitted with brass bolts, washers and thumbnuts. The bakelite lampholder was attached to a teak cross piece by two steel screws. A white bakelite torpedo switch immediately above the lampholder gives local control, while the shade is of a standard pattern in white celluloid. The cost of the lamp was under fifteen shillings. The lamp was designed and made by George G. Pace, A.R.I.B.A.

supports were only desired at, say, 80 or 100 ft. centres, as is possible with the conventional arrangement, unless the designer compromises between the two methods or else employs the Diagrid system.

Moreover, the ease with which bays can be added to the conventional design is often valuable in factories. Finally, the extensive use of knee braced trusses where the frames become capable of taking up the moments induced by wind (just as the rigid frames do without, however, presenting the same difficulties in design and fabrication), all these points make me think that the range of rigid structures has its limits for light structural steelwork, in most cases, the pin jointed design cannot easily be improved.

H. MEYER.

London.

We have submitted the above letter to Dr. Hajnal-Kónyi, who replies as follows:

SIR,—I am obliged to Mr. Meyer for his constructive remarks on my article.

Regarding the relative cost of labour and materials, it is true that on the Continent labour was comparatively cheaper than in this country but, on the other hand, in USA the relation is reversed and, in spite of that, continuity has more frequently been used in USA than in this country.

I have pointed out that "the fundamental condition of continuous structures is the rigid connection of their members which can be achieved much better by welding than by riveting." Welding has made great progress in this country during the war, both in shipbuilding and in tank manufacture. It may be expected that also in structural steelwork it will find more application after the war than before. The change-over from riveting to welding in wartime in two of the most vital branches of production is proof in itself for the advantages of welding.

Although riveting is not as suitable as welding to secure rigid connections, there are many excellent examples of riveted continuous frames abroad. In bridges, where, owing to the dynamic nature of loading and to the great number of repetitions of loading, connections are more likely to be loosened than in structures subjected to static loads only, continuous structures had been used long before welding was introduced, and have behaved very satisfactorily during a great many years of service. As a classic example, the Britannia Bridge across the Menai Street may be mentioned, built by Robert Stephenson a century ago.

With regard to the comparison of rigid frames with the conventional type trusses, the design shown in my article has a slope of 26½ degrees as against the suggested minimum of 22½ degrees. I do not think that this, combined with a rise of the tie, would affect the total weight of steel; the weight of the diagonals would be reduced but the weight of the top and bottom members would be greater. The waterproofing of the roof of the rigid frame, as shown, has been satisfactory. The æsthetic appearance of the building would hardly be affected by the suggested alteration of the shape of the trusses.

It is obvious that the same type of construction is not applicable to all cases and every type has its limitations. If a column spacing of 80 to 100 ft. is required in both directions, a different arrangement has to be made. As Mr. Meyer has pointed out, the Diagrid system may be adopted, and it is certainly not necessary to revert to the conventional type of roof trusses.

The addition of bays is not more difficult if rigid frames are used than with conventional design, and I do not think that there are valid technical reasons against the use of rigid frames instead of the conventional type.

Regarding comparison of weight of steel and cost, the example published in your last issue is very similar to that given in my article, but it should be realized that the advantages of continuity cannot be measured in tons of steel or in £ s. d.

K. HAJNAL-KÓNYI

London.

PHYSICAL PLANNING

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The bogies

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Problems

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12. Local Government Part II. — Dr. W. A. Robson

F. Schumacher, author of this week's article, came to this country as a Rhodes Scholar in 1930. A student of New College, Oxford he has also studied at several Continental and American Universities. Experienced in banking, industry, and agriculture in several countries, he is now engaged in research on economic aspects of post-war reconstruction, in connection with the Institute of Statistics, Oxford University.

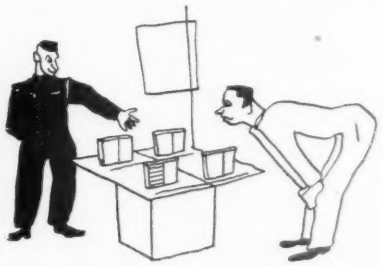
Money is the physical planner's worst bogey. Not so long ago Birmingham refused to prepare a reconstruction scheme because the Government had failed to make clear where the money was to come from. The Government has in fact said that Councils must envisage their planning schemes becoming self-supporting. Most men actively engaged in the preparation of Town and Country planning schemes find themselves unable to comply with this instruction of the Government. Faced with claims for compensation, the need for extensive public works, using costs of construction and an urgent demand for lower rents, they see clearly that planning will cost large sums of money and want to know where the income is to come from since planning authorities, like private businesses, must balance their budgets. What planners don't always see quite so clearly and what the Government elected in 1931 to keep us on the gold standard does not encourage them to see is that money is not a limiting factor for the nation as a whole. Except in so far as money is a vehicle for foreign exchange the nation is under no obligation to balance its budget. So long as we lack the bare necessities of life and the materials, men and machinery necessary to provide them lie idle in these islands, the Government not only can but ought to manufacture the money needed to set them working. The theoretical economist is as anxious for physical planning as the planners are for money, for to him physical planning is the obverse of industrial prosperity and social security.

Unfortunately there is more than ordinary friction to hinder the smooth working of economic theories when applied to problems that confront the physical planner. For instance it may seem equally easy to create effective demand by issuing purchasing power direct to consumers or by subsidising a selected industry. But in practice 20 years, during which housing has been subsidised and the average money income has risen rapidly, seem to have resulted only in an even faster rise in building costs and rents, just because the public wants houses more than most things. In short, physical planning deals with an aspect of the nation's economy dominated by monopoly. It deals with land, roads, railways, mines, gas, water and electricity, docks and buildings. It deals with fixtures whose exact position is a matter of considerable importance: which are so essential that we cannot do without them however much it costs us to make use of them; whose construction costs (when replaceable) are very high in relation to running costs. All factors which prevent or hamper competition. The problem which physical planners need the help of economists to solve is everywhere the same. How to secure the willing co-operation of owners and entrepreneurs who are in a position to do much as they please in planning schemes designed to benefit the public? Once the fundamental agreement between physical planners and economists is made clear, however, then difficulties appear in proper perspective as obstacles which can and must be overcome by joint effort.

THE BOGIES

Money is the planner's worst bogie. There are still people who talk as if social security and physical planning were alternative claims on our national income, mortgaged for years ahead in service of our national debt. Some of them are members of the Government. Is this a true view of the situation? Mr. Schumacher explains the modern economist's attitude to money in the article printed below.

BOGIE NUMBER THREE



PLANNING IS SOMETHING WE CAN'T AFFORD

by F. Schumacher

There has always been a need for planning and, in response to it, there has always been planning. The need for it has grown with the growing integration of humanity into large political units, with the growth of populations, and, above all, with the growth of the national and international division of labour. Age-old traditions have been undermined and replaced by scientific methods; systematic research has, in innumerable lines of activity, been substituted for the time-honoured method of trial and error. But the *scope* of such planning has normally remained confined to narrow limits.

We see that people are planning the lay-out of their gardens with the greatest care, and that industrialists are planning the lay-out of their factories. But all the gardens of the country together, and all the factories, are not being planned. It is nobody's business to decide where there should be gardens and where there should be factories, or how many of each there should be. It just happens.

We find families and business units applying more and more thought to the problem of how to distribute their expenditures; we find them "planning" their budgets in an increasingly scientific way. But all these budgets together are not being planned. It is nobody's business to plan the total expenditure, whether private or public, of the nation as a whole. Within each economic unit, the distribution of incomes is subject to detailed examination and often prolonged negotiation. But it is nobody's business to plan the national distribution of income and the national distribution of wealth. It just happens.

Thus we are planning in the narrow sphere and leaving developments in the large sphere to chance. We are planning where each of us is directly and immediately affected; but where each of us is even more powerfully affected—indirectly and in the long run—we put our trust in—what? The philosopher would say: in some form of "pre-established harmony." And yet, it is brought home to us every day that there is just as likely to be a "pre-established disharmony."

The reasons for this apparent blindness are not far to seek. The extreme form of mutual interdependence of all political, social, and economic factors which characterises our age is of comparatively recent growth. We are still inclined, in politics, sociology, and economics, to apply patterns of thought which were developed before its arrival. But this is not all. The matter goes deeper. Planning can extend no further than the power of the planner. I can plan my garden, because I have power over it. I cannot plan my neighbour's garden, because that belongs to him.

As growing interdependence makes planning over a wider field more and more imperative, those who experience this need most acutely strive to extend their sphere of power in order to extend their sphere of planning. The industrialist, experiencing acutely his own dependence upon the actions of his competitors, strives with all his might to eliminate competition and to become a monopolist—to extend his planning of output and prices *horizontally* over the whole stage of manufacture with which he is concerned. His colleague, who experiences acutely his own dependence upon the actions of his suppliers and customers, strives to create a "trust"—to extend his industrial planning *vertically* over all stages of production, from the raw material to the finished product, in which he may happen to be interested. More planning is impossible without an enlargement of the sphere of power controlled by the planner, and the strong trend towards monopolistic organisations in our society is best understood as a result of the overriding necessity for planning on a larger scale.

That any concentration of power in the hands of a few raises extremely important social and political problems is obvious. But it is illogical to denounce the concentration of power in the name of liberty and to demand "Planning" in the name of efficiency. Planning demands power, and power makes it possible to plan. What is not illogical is to denounce the concentration of power in private hands; to denounce such uncontrolled, and thus irresponsible, power as leading, not necessarily to inefficient planning, but to arbitrary planning, which is incompatible with freedom. "Unhappy events," said President Roosevelt in a message to Congress in 1938, "have retaught us two simple truths about the liberty of a democratic people. The first truth is that the liberty of a democratic people is not safe if the people tolerate the growth of private power to a point where it becomes stronger than their democratic state itself. That, in its essence, is fascism—ownership of government by an individual, by a group, or by any other controlling private power. The second truth is that the liberty of a democracy is not safe if its business system does not provide employment and produce and distribute goods in such a way as to sustain an acceptable standard of living. Both lessons hit home." The second truth points to the imperative need for planning; the first points to an equally imperative need of concentrating the power without which planning is impossible in the hands of the democratic state, rather than in those of private individuals.

The efficacy of power to plan, even where such power is sufficiently concentrated, is circumscribed by certain hard facts. Political power can overcome man-made obstacles; but it cannot—at least not without great cost—overcome natural obstacles. Even if complete power had been possessed by the British Governments during the nineteenth century, it is unlikely that the location of industry would have developed along substantially different lines from those it has actually taken. The natural factors—interacting with the technology known at the time—exerted an overriding mastery.

Modern technology, however, has to a large extent broken the mastery of these natural factors. The number of industries for which the location of raw material deposits remains a determining factor is constantly dwindling. With the development of cheap transport, of light metals and plastics, of electricity as a source of industrial power, etc., the bulk of modern industry can choose its location far more freely than hitherto. Labour, too, has become highly mobile, and, with the spread of mechanisation, increasingly adaptable. The availability of special types of skilled labour no longer exerts a determining influence upon the location of the majority of industries. These facts are often denied by industrialists. But their actions speak more loudly than their protestations. The fact is that new industries, during the last twenty or thirty years, have sprung up mainly in areas which were conveniently situated not with regard to raw materials and skilled labour, but with regard to the markets in which they desired to sell. This is a factor of very great importance.

It has produced a cumulative process: industries have moved to the great concentrations of population, and populations have moved to follow industry. Thus the one movement has been feeding on the other. A process of this kind, once inaugurated, gathers increasing momentum, until the "rational" actions of countless individuals have produced a wholly irrational and, in fact, intolerable result.

The great migration of British industry from the North-East, North-West, Scotland and Wales to London, the Home Counties, the South-East and the South-West is too well known to require description here. The *net* gain of population by migration, which accrued to the South during 1923–1936, amounted to nearly 2½ million persons, or an average not far short of 200,000 per year. What the gross figures of migration have been, no statistics are there to tell us. But it is clear that there exists an abundant readiness on the part of the British people to leave their places of birth and childhood and to seek economic opportunity where it is offered. It is safe to say that, had there been more opportunity, there would have been even greater migration. Those who fear that rational planning of industrial location is impossible because of the "immobility of labour," or could be made possible only by methods of wholesale compulsion, should bear the above figures in mind.

The most important feature of this great industrial migration is that the factors which induced it were not "natural," but mainly man-made. The advantages offered by the Southern regions were not a natural monopoly of those regions; they might have been provided in many other regions; yet the very process of migration itself enhanced them at a cumulative rate. "A conurbation," wrote Professor J. H. Jones, "tends to perpetuate its own growth; on the other hand it will be shown that this tendency is itself of such a nature that it can be controlled."

Why should it be controlled? Technically speaking, one might say: because there arises an

ever-widening gap between the *private* and the *social* costs which such a development entails. This is well illustrated by Government policy as to housing subsidies in central housing areas. In the 1919 and 1923 Housing Acts, no financial discrimination was made in favour of dwellings on expensive sites. But in the 1930 Act housing subsidies were graded according to the cost of sites, higher sums being paid for tenement housing than for houses and gardens. This differentiation was increased in 1935 and again later. In 1938 the subsidy for a flat built on land costing £14,000 an acre ("which may, it is thought, be taken as a rough approximation of the average cost of suitable London sites") was £27 a year for 40 years, against £8 5s. for a cottage. The difference between the two subsidies was equal to about 11 per cent. of the average income of working-class families in London. The industrialist who finds it profitable—rightly or wrongly—to open a new factory in the London area, or to maintain his old factory there, thus forces the community as a whole into paying a subsidy to his workers. His own cost accounts may show a profit; but the social cost account may well show a loss.

The L.C.C. admits that Greater London is already too large. There is an almost insoluble housing problem; the Transport Board admits that it cannot solve the problem of peak traffic; congestion in the streets is growing; health suffers; and access by the population to natural amenities becomes ever more unattainable. And yet, the growth of industries in this area is allowed to proceed. It pays the industrialist to go there, because the bulk of the expense he causes is born by others. A part of it, for instance, is born by his workpeople in the form of expenditure on daily transport. The London Passenger Transport Board estimated this expenditure in 1938 at about £15 per family per annum, or about 8 per cent. of the average income of London working-class families. The lengthening of the working day by journeys of 40–60 minutes twice a day is another item of cost—of utterly unproductive expenditure of effort—which does not enter the accounting of the industrialist.

These well-known examples may suffice to show the ever-widening gap between private and social costs which is making a good deal of the rentability calculations of modern industry irrelevant from a national point of view. On this rests the case for national planning of the location of industry.

Mr. Colin Clark has estimated the total amount of real (physical) capital in Great Britain in 1928, as follows:—

	Million pounds.
Agriculture (land and tenants' capital) ..	1,400
Industry	3,400
Railways	1,100
Dwelling houses ..	2,000
Shipping	250
Other	5,450
Total	13,600

While these estimates are admittedly subject to a wide margin of error, they are not likely to be so far out as to be valueless for our purposes. They show that the total capital of Industry amounts to no more than 25 per cent. of all capital. Yet, the location of industry has a most profound effect upon the value of the capital sunk into houses, railways, public utilities, even agriculture. The industrialist, when left free to decide upon location, takes into account only the rentability of the capital he himself employs. But the nation as a whole is interested in the way in which his activities affect the rentability of all other forms of existing capital.

By moving to a new district, which may afford him often mere trifling cost advantages (and frequently only purely personal satisfactions), the industrialist forces the local authority to provide houses, schools, hospitals, churches, as well as roads, drainage and sewage disposal works, and all other local government services. The cost of these services is not even proportionately born by him, since industrial hereditaments are now derated by 75 per cent. Other ratepayers and the general taxpayer have to bear the cost. In the area he leaves, or rejects, substantial losses may be incurred through the under-use of similar services provided at public or private expense. "Neither the burden on the one side," wrote Mr. W. A. Robson, "nor the loss on the other, appears in the manufacturer's cost of production."

Since all these facts are comparatively well known, it may be asked why some national plan controlling the location of industry has not been adopted long ago. Is it merely lethargy or short-sightedness which has prevented this long overdue development? Hardly.

The Board of Trade, in its evidence submitted to the Barlow Commission in 1937, explained the matter as follows: "When it becomes necessary for an industrialist to consider finally whether or not to start the new business, it may be that the effect of a decision to prevent him from starting in a locality which seems to him for whatever reason to be most suitable will assume in his mind an undue importance." Thus society is at the mercy of the industrialist, whose whims have to be satisfied whatever the cost. If society feels compelled to curb his absolute freedom of choice, such a curb "may assume in his mind an undue importance." And if the industrialist—"for whatever reason"—says "No," how can the Civil Servant justify himself before a public thirsting for more jobs. The legislator who contemplates conferring far-reaching powers upon a National Planning Board is well aware of this dilemma. Thus he hesitates, and the power is not conferred. There is a crying need for Planning, but there is a perhaps even more crying need for jobs. Society is at the mercy of those who can give employment; their smallest gifts are gratefully received, and their costliest whims are gratefully paid for. But let us not blame the industrialist who acts according to his lights.

It is necessary to realise that all this is not a dilemma inherent in the problem of national planning as such: it is inherent in a situation of economic stagnation and unemployment. What appears as weakness on the part of legislators and officials and as short-sightedness on the part of business men is nothing but the inevitable outcome of a general economic system which fails to function rationally. Without resolving the great underlying paradox of "poverty in the midst of (potential) plenty," no degree of enthusiasm is likely to overcome the obstacles against national planning; against applying conscious policy in the place of *ad hoc* palliatives; against making *social* rather than mere *private* costs the guiding principle of industrial location.

Let anybody who considers this an exaggeration study the war experiences of this country with an open mind. Things have become possible that were undreamt-of before. It is more than superficial to explain the war-time possibilities of national planning merely with the patriotism and self-sacrifice of employers and employees. These factors play their part *en detail*. But the decisive underlying factor is that the exigencies of war turn unemployment into a shortage of labour and "over production" into a shortage of goods. Employers and employees are not found wanting in their response to buoyant demand. The business man does not resist being told where to locate his factory if compliance with a national plan is a condition for getting orders. Only in a stagnant and under-employed economy can he afford to be capricious. The lesson which must be learned by all who are interested in physical planning is that a pre-condition of success in their field is *economic* planning, i.e., the planning of "effective demand."

It is within the power of the Government to plan for full employment. It is the Government, and no one else, who can, at any time, put the whole nation to work by creating "effective demand" for the nation's output. It is unreasonable to expect the business man to provide employment when the Government fails to provide a market large enough to absorb the output of such employment. And as long as the nation remains at the mercy of employers giving additional employment while the output of existing employment cannot be profitably sold, so long is the Government of such a nation quite naturally and quite reasonably reluctant to interfere with the unfettered freedom of the men upon whom it believes to depend. It is utopian to expect that the paradox of a lack of physical planning can be overcome as long as the fundamental paradox of "over production" and unemployment remains.

Thus the ball is thrown back to the economist, and the economist, in due course, must pass it on to the politician. He can show that there are no technical difficulties in maintaining "effective demand" at such a level that only the availability of physical resources remains as a limiting factor to the nation's prosperity. He can elaborate the financial technique which will avoid equally the danger of "inflation," resulting from an excess of spending, and of "deflation," resulting from a deficiency of spending. The scientific understanding of these problems has made enormous strides during the last ten years, largely under the inspiration of Lord Keynes. But he cannot overcome the resistance of social and political forces which stand against the application of the new techniques and uphold a discredited economic theory as their principal line of defence for the *status quo ante bellum*. All those who have the vision to see that better things are possible than the present-day towns of Britain; that a more rational use can be made of Britain's scarce land than letting it be absorbed by the sprawling of unplanned conurbations; that there is no iron law of nature which condemns hundreds of thousands and millions of healthy men and women to involuntary idleness; all those who want to plan a better world to live in than the old; who, like President Roosevelt, have "distinct reservations as to how good the good old days were," and who have abandoned—even though it be with regret—the cruel and optimistic nineteenth century notion of a "pre-established harmony"—the "planners" of the future, that is to say, must look beyond their specialised field of planning and must understand the inherent connection between their chances of success and the general economic policy pursued by their Government. Without the right planning of "effective demand," the planning in all other spheres will be condemned, if not to complete sterility, certainly to frustration.

It is not until the New Economics become widely understood amongst all those who are working for the next great advance of humanity, that any decisive battles can be won. Are we ready to charge the Chancellor of the Exchequer with the task, not of balancing the Budget, but of balancing the economy as a whole? Are we prepared to insist on a Government spending policy after the war which is concerned, as to-day, not with cutting the coat according to the cloth of revenue, but with putting all available *real* resources of man and nature to productive use? Or are we going to be frightened by the time-dishonoured incantations of financial orthodoxy which try to make us look upon Budget deficits as a road to disaster and a rising National Debt as a burden on posterity?

Are we going to realise that, in the words of Lord Keynes, "Consumption—to repeat the obvious—is the sole end and object of all economic activity," and that salvation from the scourge of unemployment cannot be found in "sacrifices" and economy, but only in letting the vast unsatisfied needs of the people become "effective demand"? Or are we going to

continue to draw false analogies from the economics of business to the economics of the nation as a whole? For a business man, as for any economic unit that is merely one part of the whole, "spending" and "earning" are two distinct processes, and the former has to be kept in line with the latter. But for the nation as a whole, "spending" and "earning" are merely the two aspects of the same series of transactions; the one cannot be adjusted to the other, for the two are necessarily identical; from which it follows that both together must be adjusted to an independent third: and that is the availability of *real* resources. It is reasonable to urge the business man to practise "economy" when his income is small. But it is madness to urge the Government to practise economy when the National Income (and therewith the volume of employment) is lower than it could be. For the individual, income is a result, not of his own spending, but of other people's spending. For the nation as a whole, the National Income is the result of its own spending. If the National Income is smaller than—given the real resources—it could be, the only way to raise it is to increase the rate of National Spending, whether private or public.

These simple lessons have to be learned. And it is not enough that economists should understand them. Their general political significance is such that every intelligent democratic citizen must come to understand them. The old system of economics, which had no place for unemployment, over-production, or any other of the important economic ills of our time, had indeed achieved a degree of obscurity—not to say absurdity—which made it impossible for the laymen to understand anything about it. But the new system of economics has found its way back to common sense. All men and women who, like President Roosevelt, want to be builders rather than wreckers, must find their way to it.

Is an economist who pleads for a wider understanding of the simple fundamentals of his science merely pleading *pro domo*? On the contrary; he is longing to make himself superfluous. He is longing to achieve an economic order in which his services are no longer needed, but which gives to the architects, the town and country planners, the engineers, managers and technicians—which gives to all those who work with the real resources of life fair chances and full scope. He is tired of hearing about the "mysteries of finance" and the "iron laws of economics," because he has learned that money can never be more than a ticket to real wealth, and that its function must never be anything but the promotion and facilitation of production and exchange. He wants the people to look upon money merely as the "reflected image" of reality; to stop asking: "Where is the money going to come from?" and to start asking: "Have we got the labour and the materials to do what we want?"

This does not mean that "money" is unimportant, nor does it mean that any simple technical reform of the banking system will solve our problems. The important thing is spending, and a direction of spending which puts first things first. Money is important solely because it is the vehicle of spending. How that vehicle is created and who creates it is of no more importance than how a cinema ticket is printed and by whom.

But there must be enough cinema tickets to fill the house; just as much as there must be a show on for the tickets to have any value. The two things must go together, and it is the task of the Government to see to it, in the economy as a whole, that the two do so go together. Let us bring the argument back to the question of housing or of industry. If the Government builds houses, or causes them to be built, it must make sure that the people who want to live in them have the money to pay the rent. And if the Government builds industries, or causes them to be built, it must make sure that the people who want to consume their output have the money to buy the new goods.

Immediately after the war it will suffice for the Government merely to build the houses and the industries and not to worry much about the people's purchasing power. For the people will have their war savings to spend, and industrialists will have their accumulations of unexpended amortisation funds, E.P.T. refunds, and so forth. But the time will come before very long when these war-time accumulations of purchasing power will have spent themselves, and then we shall find ourselves thrown back into the old contradictions. It will then no longer be enough for the Government merely to build, or to urge or enable private enterprise to build. Then comes the time of crisis and decision. For that time, every worker for a better world must be prepared.

In order to continue full employment at this point, it is necessary that for every additional house completed and for every additional consumers' good thrown on the market, there must be additional purchasing power in the hands of the people. The methods by which such purchasing power can be put into their hands are legion. We shall mention only two. The Government may *directly* distribute additional purchasing power by means of increased social security payments, old age pensions, family allowances, and so forth. Or the Government may reach the same end *indirectly* by subsidising the building of houses, the production of food, clothing, semi-luxuries, and so forth. Which of the two methods is chosen is not an economic, but a political decision. The former maintains a maximum of free consumers' choice; the latter enables the democratically elected representatives of the consumers to influence consumers' choice by means of differential subsidies. If the Government decides that a larger proportion of the national productive effort should go into rehousing the population of the country that would go into it under free consumers' choice, it will subsidise house building and thus "artificially" cheapen rents. If the Government desires to leave the distribution of the national effort amongst the various lines of production entirely to the preferences of consumers, it will subsidise consumers' incomes directly and let the people spend their money on houses, or food, or clothing, or on whatever they please. At the present juncture, a good case can often be made out in favour of some degree of State interference with consumers' choice. From a "liberal" point of view, on the other hand, preference may be given to letting the people choose for themselves.

Whatever may be the political decision taken in this matter from time to time, one thing is clear: the two methods just described are *alternative* ways to the same basic objective. It is senseless to argue, as has been argued, that Britain, for instance, could not commit herself to adopt Sir William Beveridge's Social Security Scheme in view of the unknown magnitude of certain "rival claims" on her total resources, such as the claims of housing or agriculture. If the old age pensioners, the parents of large families, or any other persons in need are given money to spend, what are they going to spend it on? Precisely on houses and on food. Social Security payments, therefore, are *one of the means* of calling more houses into existence; they are *one of the means* of reviving British agriculture. If the social objective of post-war policy is the abolition of want, it can be attained by the one method *or* by the other: by giving the needy money to spend on food, clothing, and shelter, *or* by subsidising the prices of food, clothing and shelter. The two are not rival claims on the nation's resources, but rival methods of putting the nation's resources to use.

Economics has become a simple subject. If it still appears a difficult and technical affair, this may be partly the fault of economists. But it also has other reasons. The reforms to which modern economic thought points are of deep political significance. They go to the very root of the power relations of present-day society. By shedding its old obscurity and sterility, the science of economics has become a political science. Its teachings are being resisted, not on the grounds of logic, but on the grounds of vested interest. The financial unorthodoxy for which it pleads is denounced, not because it must lead to disaster, but because it implies and leads to an alteration in the distribution of income and wealth. The limitations to the influence of modern economic thought upon the course of events are political limitations. It is for this reason that the economist, realising that the planning of "effective demand" is the pre-condition of success in all other fields of planning, must seek to join forces with all those who believe that conscious policy can build a better world. He seeks their help so that he may be better able to help them.

CURRENT EVENTS

Civic Diagnosis

The Hull exhibition, which was opened by the Mayor on September 1, has certainly succeeded in attracting the citizens of Hull; 1,100 visited it on the second day, 1,700 on the third. This is encouraging for physical planning in general as well as for Hull.

Boundaries

In a letter in *The Times*, September 2, Sir Stephen Tallents, public relations officer of MOTCP, answers the complaint of Mr. Clough Williams-Ellis that uncertainty about the future boundaries of local authority areas is preventing him from planning an estate. . . .

Sir Stephen Tallents argues that joint committees meet this difficulty and are enabling planners to go ahead with work which no readjustment of local authority areas should rob of its value. . . .

Col. Trustram Eve followed on September 4 by stressing the psychological effect on local authorities if they receive no guidance from the Government as to their future existence. He particularly emphasized the need for a central authority, with power to settle differences of opinion between the various interests concerned, which still hamper them in their efforts to research and plan.

Information overseas

America, through the courtesy of "British Information Services, an agency of the British Government," has received a far more complete dossier of official and unofficial groups working on post-war planning in this country than we at present possess. This booklet, called *Post-War Planning in Britain*, has been issued free to all members of the American Society of Planning Officials, and is available to all others interested in the matter. Over here, the most complete source of information up to date is the unofficial *Planning and Reconstruction Year Book*, 1943, published at a guinea by the Todd Publishing Company. We hope that Mr. Bracken will fill this gap in the information of British planners.

NEW BOOKS

Town and Country Planning: the quarterly review of the Town and Country Planning Association. Summer, 1943.

The Small House: by Marian FitzGerald, and *Planning and Performance*, by W. A. Robson. Nos. 25 and 29 of the *Design for Britain* series, Co-Operative Permanent Building Society. Dent, 1943, 6d. each.

Houses, Towns and Countryside: Elizabeth E. Halton. An illustrated booklet for the "ordinary citizen," Town and Country Planning Association, 1943, 1s.

Plan: Nos. 1 and 2. Journal of the Architectural Students Association, 1943, 3d. each.

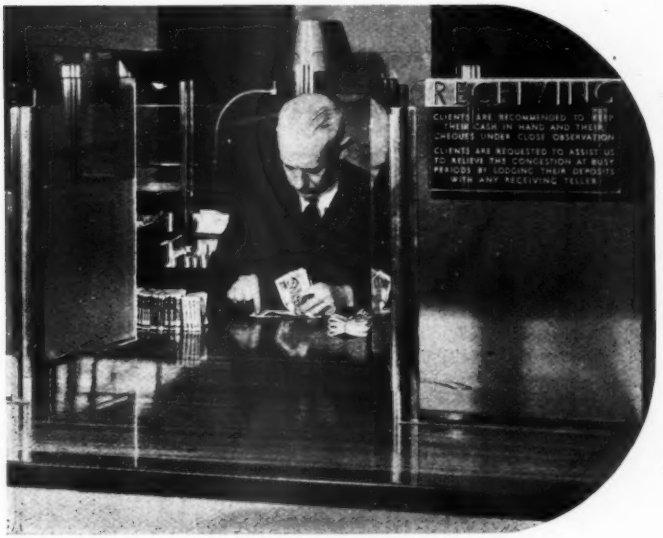
Agriculture To-day and To-morrow: A series of ten lectures to the Royal Society of Arts. Journal Nos. 4634-4644, May-July, 1943.

Employment Policy and Organization of Industry after the War: G. D. H. Cole. The outcome of a series of Nuffield College conferences. Oxford University Press, 1943, 2s.

BANK

AT MELBOURNE

DESIGNED BY STEPHENSON AND TURNER





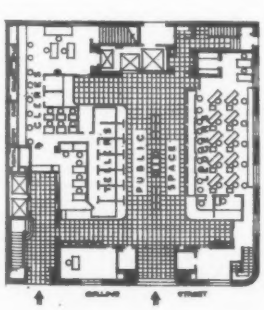
Top, in the banking hall the ledger clerks' and tellers' cubicles have low glass screens without grilles. Above, general view of exterior which is faced in Stawell freestone; the main entrance is in the Collins Street front, which is shown on the left of the illustration; the other elevation faces Elizabeth Street. Below, plans of ground, second, third and ninth floors.

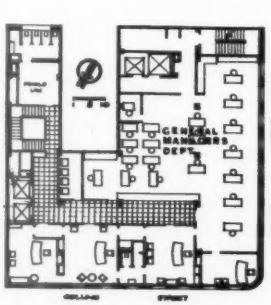
GENERAL—The administrative office and the Royal Bank Branch of the English, Scottish and Australian Bank in Melbourne are situated at the corner of Elizabeth Street and Collins Street, two of the main streets of the city. The building is known as the Royal Bank because it occupies the site of the headquarters of that banking business incorporated into the E.S. and A. in 1927.

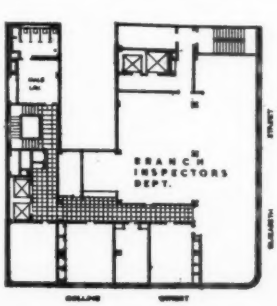
PLANNING—The Royal Bank has ten floors above ground and two below. The sub-basement is devoted to ventilation, air-conditioning and electrical equipment; the basement, ground floor and part of the first floor are occupied by the Royal Bank Branch, the remainder of the first floor and the second and third floors by the administrative offices, including the general manager's and chief inspector's suite. Floors four to eight are let to tenants. The ninth floor houses the staff dining rooms and the kitchen serving them. The banking hall has the ledger clerks' and tellers' cubicles with low glass screens without grilles. Staff dining room on the ninth floor is seventy-five feet long and equipped to seat 150 at a time. Two whole sides of the room can be opened up in glazed folding doors towards balconies. The view to the south and west ranges over Port Melbourne to the distant bay.

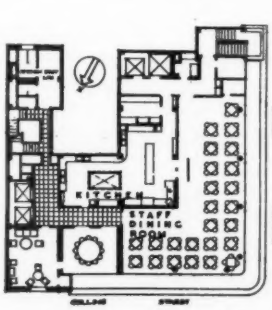
CONSTRUCTION—The most interesting point is the columnless design of the banking hall on the ground floor. It is achieved by means of two girders sixty feet long, six feet deep, and weighing seventy tons. The maximum thickness of plates of these girders is nine and a half inches. On them the upper floors rest.

EQUIPMENT—The offices on the lower floors are completely air-conditioned. The system adopted has been worked out in co-operation with experts in the United States, and is operated to keep the inside temperature at 72°F. and humidity at 49° throughout the day. Under extreme conditions of summer heat the system will maintain a temperature



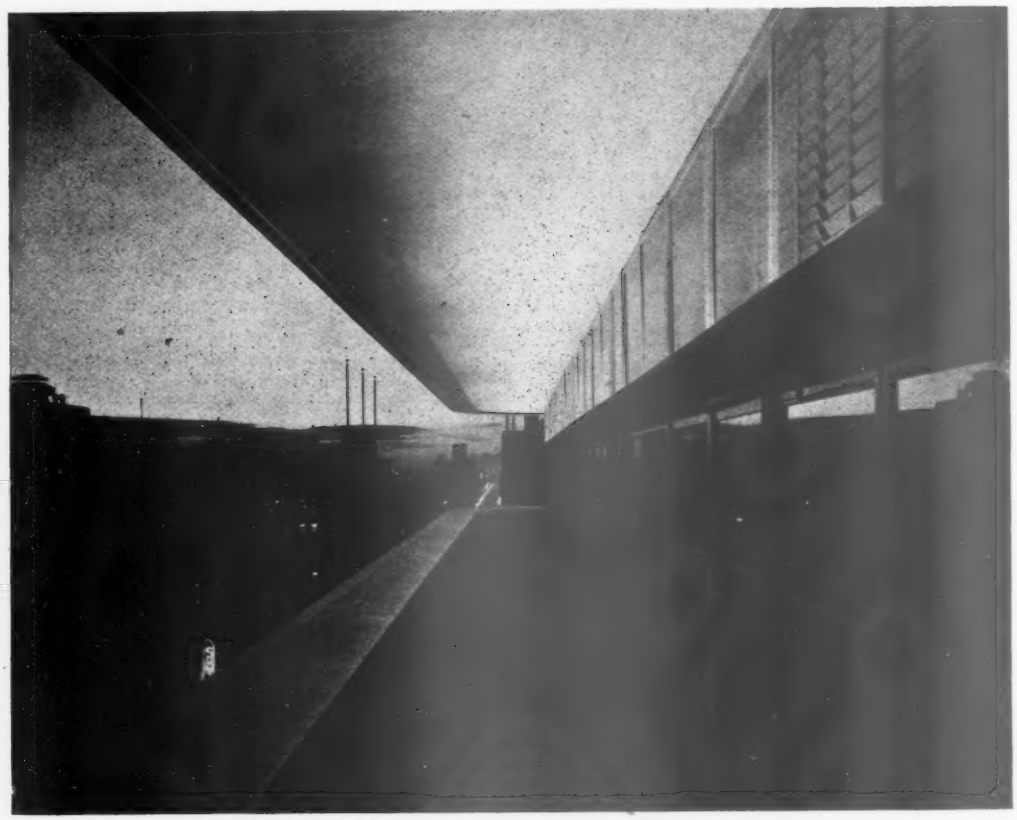








Left, chief inspector's office; sub-manager's office; and the staff dining room. Centre, balconies to staff dining room on ninth floor. Bottom, another view in the staff dining room.



15-20° below outside. The upper floors are served by a system of ventilation providing to all rooms air which is washed and either warmed or cooled according to requirements. Extract systems of ventilation have been provided for the basements, kitchen and lavatories throughout the building. There are five lifts: two for high-speed passenger traffic, one for goods, one for staff use, and a cash lift to be used in conjunction with the strong rooms in the basement. A careful study has been made to reduce noise. Acoustic plaster and acoustic tiles have been widely used. Lighting for the banking hall is a combination of strong neon tubing in the central bay of



BANK AT MELBOURNE.

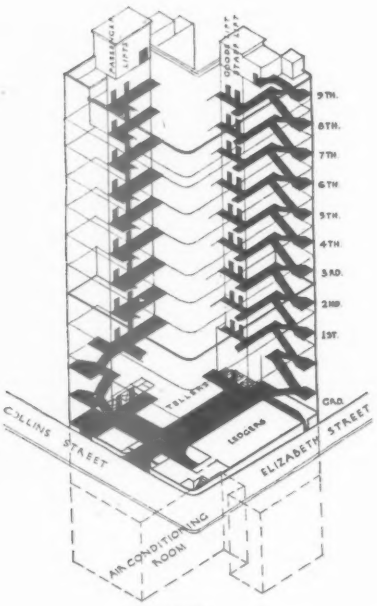


The colour scheme of the banking hall is dominated by the blue and deep parchment walls and ceilings. Curtains are deep red, the rubber flooring deep red and light blue; woodwork is Black Bean; metalwork, stainless steel. The hall has glass screens to create a feeling of spaciousness. Lighting consists of strong neon tubing in the central bay of the ceiling and separate "down lights."

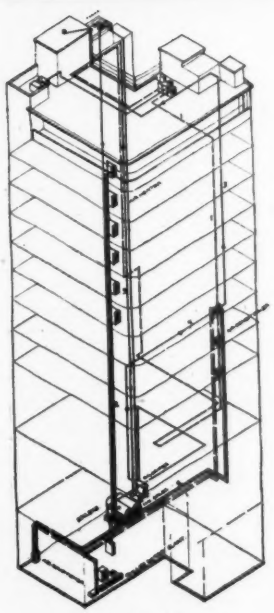
DESIGNED BY STEPHENSON AND TURNER

BANK AT MELBOURNE

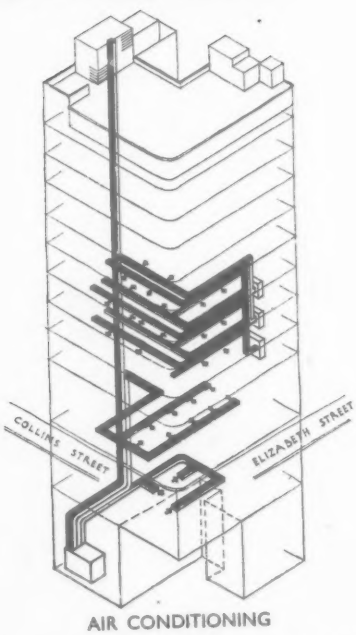




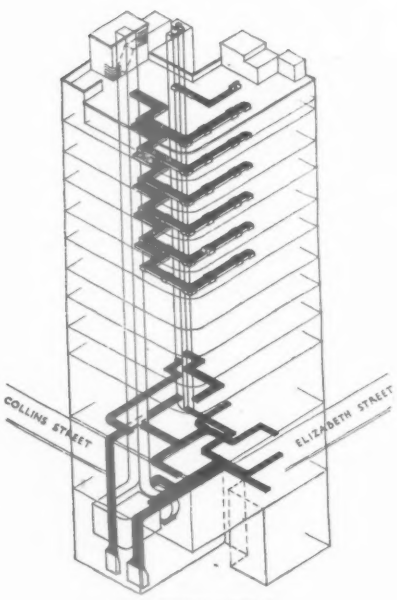
TRAFFIC



HEATING



AIR CONDITIONING



VENTILATION

the ceiling and separate "down lights" firing concentratedly on to the working spaces for tellers and ledger clerks. Ledger machines have individual lamps.

FINISHES—The building is faced in Stawell freestone on a base of polished Dromana green granite. The great bronze doors of the main entrance have solid cast bronze medallions with the heraldic devices of England, Scotland and Australia modelled by O. L. Steen, of Sydney.

The colour scheme of the banking hall is dominated by the blue and deep parchment colours of walls and ceiling. The curtains are deep red, the rubber flooring deep red and light blue. The woodwork is Black Bean which goes particularly well with the Wombeyan marble, the stainless steel metalwork and the glass screens. The general manager's suite has Black Bean panelled walls, green carpeting and curtains, and Black Bean furniture with leather coverings.

Top left, main office of general manager's department.

INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications, and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

PHYSICAL PLANNING

1230 TVA

TVA—AN ACHIEVEMENT OF DEMOCRATIC PLANNING. *Julian Huxley.* (*Architectural Review, June*, 1943). TVA stands for Tennessee Valley Authority, the outstanding example of democratic planning. The first large-scale regional planning organization (1933) which operated wherever possible on the principles of persuasion, consent and participation. A fully illustrated account of its first ten years.

(1) The organizational chart of the TVA shows five main divisions—Water Control in the River Channel; Water Control on the Land; Power; and two Councils, the Management Service Council and the Regional Planning Council.

(2) The total area of the lakes and reservoirs thus produced is over 1,100 square miles—a figure whose magnitude can be visualized by comparison with the less than 25 square miles of all the lakes in the English Lake District taken together.

(3) One of the original aims of the TVA, and one much publicized in its earlier years, was to set up a "yardstick" by which to measure the relative efficiency of private and public organizations for the generation of electricity.

(4) The other major objective of the TVA has been to check soil wastage and improve soil utilization.

(5) The TVA has many secondary functions, which it is impossible to discuss at length in this note. However, we may take recreation as an example, partly because it so well illustrates the TVA's method of securing results by co-operation with other agencies, and partly because nowhere else in the world has the problem of recreation within a considerable region received such careful and exhaustive treatment.

(6) The TVA has not only practised a deliberate architectural policy, it has also practised a deliberate policy about relating architecture to its other activities. To quote Mr. Wank, it has "consciously adopted architecture as one of the instruments of policy in building up a sounder, more vital civilization in the Valley." It has called in the architectural designer to help not only in site and city planning, but in the work of general planning. Further, TVA developed its own philosophy about its public buildings. It felt that they should be "expressive of the pride a whole nation takes in itself," in some ways a modern equivalent of medieval cathedrals or renaissance palaces.

(7) The TVA has succeeded in demonstrating that there is no antithesis between democracy and planning, and that planning cannot only be reconciled with individual freedom and opportunity, but can be used to enhance and enlarge them. Here, too, it has invented new social tools; the enlistment of the educational system to induce a sense of participation in the plan on the part of the population at large is perhaps the most original.

The speed of its advance is also very encouraging. Ten years is a very small period in human history, yet in less than ten years the TVA has set a new stamp on the Valley, not only on its physical face, but also on its administrative machinery and on the social attitude of its people. Its major constructional programme is now practically complete, and the resultant economic and social benefits show signs of rapid and cumulative growth.

Last, but not least, the TVA idea, of the planned development of natural regions such as river valleys, has already found its way into the world's general thinking. TVA ideas and methods are helping to guide the growth of new planning agencies such as the Middle East Supply Council; studies are being made of how a set-up of general TVA type could be adapted to serve as an international instead of a national agency.

1231 Public Health Services

THE REFORM OF THE PUBLIC HEALTH SERVICES. *Sir Arthur S. MacNalty, K.C.B., Nuffield College* (*Oxford University Press*, 1943, 2/6). In all planning, public health considerations should receive their full share of attention.

(1) War experience should encourage communal feeding arrangements. All canteens, restaurants, and communal feeding centres provided by local authorities and industry should be associated with a dietetic section.

(2) Not only should houses be properly planned to give adequate ventilation, lighting, and hygienic accommodation, pure water-supplies and drainage, but town-planning should envisage green belt schemes, playing fields, swimming pools, and full opportunities for physical exercise and recreation in the open air.

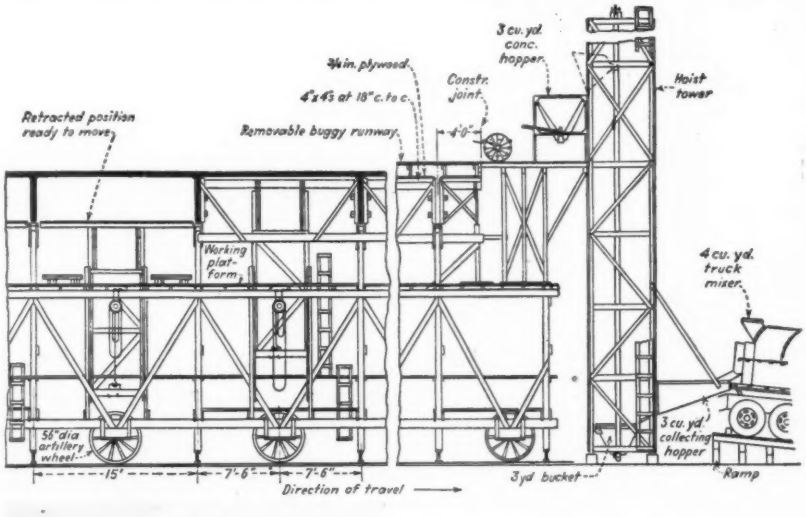
(3) In each region there should be a number of health centres closely linked up with the special clinics and mainly staffed by general practitioners. The details of this organization as the great clearing house for the work of national health are described and discussed.

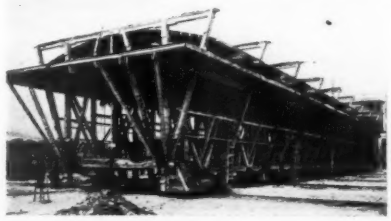
STRUCTURE

1232 Travelling Retractable Forms

BUILDING AN 82-ACRE CONCRETE ROOF WITH TRAVELLING RETRACTABLE FORMS. (*Engineering News Record, June* 17, 1943, *pp.* 62-65.) Ribs protruding below a barrel-arch concrete roof required ingenious form planning to permit use of a travelling carriage on the construction of a huge war plant. Forms dropped 4½ ft. to pass under the ribs, then rolled ahead on timber frames supported on artillery wheels; chain hoists used to raise the roof form to its new position. Over 100,000 cu. yd. of concrete poured for the 82-acre roof.

Concrete ribs extending 4 ft. 3 in. below the roof on the one-storey concrete multiple barrel-arch machine and assembly building of the Dodge-Chicago plant, division of Chrysler Corp., presented an unusual problem to the constructors. The building, said to be the country's largest, covers 82 acres and was constructed in six months during the late fall and winter. The 3 in. thick, 46 ft. radius arch roof spans 38 ft., and it is supported on continuous concrete girders on columns at 30 ft. c. to c. The ribs are 5¾ in. wide and 15 ft. c. to c., stiffening the roof so that reinforcing steel requirements for the entire structure are at the unusually low figure of 2.7 lb. per sq. ft.





Above, side elevation of a travelling retractable form built in sections 120 ft. long by 38 ft. wide to move as a unit. One tower hoist serves the concrete placing for a four-bay width, moving ahead with the form.
Left, an illustration of the "juggernaut" moving sideways on rails to new section in 82 acre building. See item No. 1232.

of floor area. It was necessary to devise an arch-slab form that could be lowered 4½ ft. because the ribs otherwise would have blocked movement of the usual traveller, which drops only a few inches for clearance. Forms were built into an all-timber carriage, one arch (38 ft.) wide and four bays (120 ft.), or eight rib sections long, well braced throughout, with the form for the rib-soffit built rigidly into the frame. The carriage moved on eighteen 56 in. dia. steel-tyred artillery wheels, propelled by a hand winch operated by four men or was pulled by a tractor. It had a work platform about 5 ft. below the rib-soffit level to accommodate the form erection.

Forms were built for each of the longitudinal bays of the structure and started at one end as a battery. Some additional units were started at the opposite end of the structure, working toward the centre to complete certain sections as soon as possible. As soon as the concreting in this area was finished both sets of forms were rolled out to one end of the structure and moved transversely to a new location for further use. Forms were used an average of fifteen times each. The concrete was placed in units of four bays in width, the fifth bay being delayed until the first units were cured and stripped. More than 400,000 cu. yd. of concrete, to be distributed to 20 structures over an area of 500 acres in a little more than six months, made it necessary to provide a mobile means of mixing and distributing concrete. Transit-mixing was adopted, forty 4 cu.-yd. truck-mounted units being used to haul from two batching plants set up on the site. Each of the batching plants was capable of charging a 4 cu.-yd. mixer in 1½ min. A maximum daily output of 4,300 cu. yd. from the two plants was attained.

LIGHTING

1233 — *General Principles*

LIGHTING FOR EASY SEEING. *Luckiesh, M.* (*Architectural Record, May*, 1943, *p.* 54.) Discussion of certain general principles of artificial lighting design with illustrations.

Matthew Luckiesh is an American illuminating engineer with a penchant for writing. The present article is pleasantly generous in wording, and it is not surprising to find that the whole of the reference bibliography has also come from the author's pen.

However, this in itself is not a serious criticism of a quite informative paper. The author commences with a warning that the amount of illumination alone is often a misleading criterion of lighting, because other factors are fundamental to the ease of seeing. In the first place, the eye is concerned with the brightness of what it sees, which is the amount of illumination, modified by the reflection factor, so that illumination alone obviously cannot have any meaning; and in the second place, discrimination depends upon contrast, or differences in the brightness of various things in the field of view. At the same time, although contrast is essential if the eye is to see shapes for what they are, there should not be too much contrast between the central field of vision as a whole and the general background, or one may experience discomfort — sometimes extreme discomfort. Thus, for reading, a reasonable contrast between paper and print is obviously essential, but it may be less obvious that if the rest of the room is dark, reading may not be comfortable, or if the surroundings are actually brighter than the page, then one can be acutely uncomfortable. The best background condition has long ago been shown to be of slightly less brightness than the central field of view. This phenomenon explains why, for instance, one sometimes feels that a light is too strong, when the walls, carpets, etc., in a room are dark; the contrast between the light in the centre and in the periphery of the eye is then too great.

Dr. Luckiesh brings out all these points with good illustrations concerning the reflection value and influence of furniture colour, machinery colour, floor surfaces and so on, and he sums up his remarks with some good practical recommendations.

It is perhaps worth mentioning a point about the experimental evidence quoted. Dr. Luckiesh has used the rate of involuntary blinking as a criterion of eye-strain, but recent English work indicates that this gives an unreliable measurement. This in no way discredits the views stated, which are actually founded on many researches, by many investigators, working over a period of many years in several countries.

QUESTIONS and answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: THE ARCHITECTS' JOURNAL, *45, The Avenue, Cheam, Surrey.*

1234 — *Concrete Floor Units*

Q *We should be pleased if you could give us particulars of any manufacturers of concrete floor units to set in concrete to withstand very heavy wear.*

Our particular problem is constant traffic of trucks with steel wheels, which rapidly wear out the best of concrete floors, even though these contain special aggregates.

The other difficulty is that steel (such as steel tiles) becomes coated with a thin film of grease, making the floor dangerous for employees.

A The Cement and Concrete Association, to whom we referred your enquiry, advises the use of 12 in. by 12 in. by 2 in. floor tiles obtainable from the Duras Cast Stone Co., Ltd., Coldblow Lane, New Cross, London, S.E.14, or from The Castle Concrete Co., Ltd., Broadstairs, Kent.

1235 — *Buying of Sites*

Q *Are any restrictions made by the competent authorities in the buying and selling of sites (freehold) which have been cleared following enemy action? Clients of mine, a religious and charitable organization, have the opportunity of acquiring an adjoining site for purposes of post-war extension to their present buildings. No speculation is intended.*

A In the case of a site cleared by enemy action, the War Damage Commission should be consulted before the site is sold.

You are, of course, aware of Town Planning Regulations and appreciate that freedom from restriction as regards purchasing a site does not necessarily mean freedom from restrictions as regards developing the site.

1236 — *Slate Window Cills*

Q *Will you please give me the names and addresses of firms who in normal times produced Slate Window Cills.*

A We give below the names and addresses of three manufacturers:—

Messrs. John Williams (Rotherhithe) Ltd., Dinorwic Slate Wharf, London, S.E.16.

Messrs. Lewis Williams, 355, Upper Street, London, N.1.

Messrs. Wilkinson & Long, Bridgwater, Somerset.

SOCIETIES AND INSTITUTIONS

Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economise space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries and not verbatim.

TCPA

Hull Conference

September 4, at Guildhall Reception Room, Hull. Conference on *Planning for Living*, sponsored by the Town and Country Planning Association. Speakers: Professor Patrick Abercrombie, on HULL IN THE NATIONAL PLAN; Sir Noel Curtis-Bennett, K.C.V.O. on THE IMPORTANCE OF PLAYING FIELDS IN POST-WAR TOWN AND COUNTRY PLANNING; Gilbert McAllister, M.A., on THE NATIONAL PLANNING BASIS. Chairman: Alderman J. L. Schultz, J.P., Lord Mayor of Hull.

P. Abercrombie: Every town is faced with two sets of problems in planning — (*a*) its external relationship with the region and the country as a whole; and (*b*) its internal structure. It is impossible to make a positive plan for the latter without some decision on the former.

There is a great difference in quality between a positive creative plan and a negative controlling scheme for the internal structure only. Both are necessary but the positive plan requires constructive proposals—the negative waits until things are submitted. The external and internal positives are both affected vitally by topography. Hull's topography is important in considering both; the local topography of Hull is comparable with Chicago, but its history has been longer and the effect of its history more potent.

We must consider Hull as a port and its future trade. There are various schools of thought as to location of ports.

Are we to have megalopolis or rurubanization —swollen congested cities or a countryside ruined by unplanned scattered building or a balance between the two? How much can



L. E. Walker, Photo.

CHIEF CONSTABLE'S HOUSE, KING'S LYNN

THE stone central feature which bears the date 1784 is, with its festoons of iron fetters, an obvious copy of the Debtors' Door of the Old Newgate Prison—completed in 1782 to the designs of George Dance the younger—and the façade, although well detailed, seems to be an assemblage of parts not originally designed in relation to each other. Every successful achievement stirs up a host of imitators, and during the thirty-odd years since the introduction of 'PUDLO' Brand cement waterproofer—the first British product made for this purpose—some 150 cement waterproofers have been offered for sale. Most of them have slipped into oblivion, but the approach of post-war reconstruction will encourage a resurgence of these and other materials which will tempt by their price, and by the almost unlimited claims made for their performance. "*Be not the first to try the new, nor cast the old away.*"

'PUDLO'
BRAND
CEMENT WATERPROOFING POWDER

KERNER-GREENWOOD & COMPANY, LIMITED
ANN'S PLACE, KING'S LYNN

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The word 'PUDLO' is the Registered Trade Brand of Kerner-Greenwood & Co., Ltd., by whom all articles bearing that Brand are manufactured or guaranteed.

EXTRA DAYLIGHT



★ These photographs of a London store, both taken in the same daylight conditions at 8 a.m. (G.M.T.), show the great increase in interior lighting which resulted when a transom of Prismatic Glass was fitted. War has shown that lofty plate glass windows are not essential for shop window display. Clear Polished Plate windows up to a height of 100" above window bed level are generally considered adequate for normal display purposes, and by fitting the space above with Prismatic Glass, daylight will be refracted on to the display. This extra use of natural light solves an important display problem, and points to permanent economies in shop window lighting.

ABOVE IS A SHOP WINDOW BEFORE FITTING A PRISMATIC GLASS TRANSOM ; BELOW, THE SAME WINDOW IS SHOWN WITH SUCH A TRANSOM.



This is published by Pilkington Brothers Limited, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.

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where architectural students may get advice and information on all questions relating to the properties of glass and its use in building.

a local authority effectively control? And is control to be from Whitehall, by the region or by the local authority? Who is to decide these many interlocked and sometimes contradictory aims?

There is need for a closer study of the Barlow Commission proposals, to the national use of land for food growing and the relationship of these to the future of Hull. I suggest that a Central Research Commission should be set up, that local surveys should be conducted under central guidance and, finally, that local initiative must be fostered and encouraged.

N. Curtis-Bennett: There are scarcely half a dozen large towns in the whole of Britain which provide opportunities and open spaces for anything approaching the needs of the growing number of young men and women who wish to take part in team games. In the congested parts of Greater London, for instance, the London County Council, with all its parks and commons, can only grant cricket clubs a pitch for six games in the season, and football clubs a pitch for seven games.

Taking eight of our largest cities, it appears that the provision of open spaces and playing fields of all kinds only provides on the average one acre for every 560 people. That, as I am sure you will agree, is a serious fact, and it provides an apt answer to those armchair critics who blame the man in the street for thronging to see cricket and football matches instead of playing the game himself. It is a mockery to make that gibe in face of the fact that scarcely any of our big towns possesses more than one-third of the accommodation needed if all who wish to enjoy the advantages of outdoor recreation are to be provided with reasonable facilities for that purpose.

Fewer working hours must necessarily increase leisure time and indeed it has been gravely stated at an International Labour Conference that machines are likely to displace human labour to such an extent that it should not be necessary for operatives to work for more than 24 hours per week. It therefore seems to me to be a matter of the highest importance that our legislators shall forthwith take stock of the present position.

The war has already during the last four years completely altered the habits and way of life of our young men and women. They have become open-air conscious. They have had ample opportunities, hitherto denied to most of them, for taking part in team games, and they will certainly demand after the war reasonable opportunities for that physical recreation which they have come to regard as essential to their well-being.

In considering this problem we must remember that the war has involved the transfer from town to country of countless factories and industries, many of which are destined to regard their present location as permanent.

Tens of thousands of new houses will spring up to accommodate the workers employed at the new factories and many a rural village will become a centre of industry. This dispersal of industry involves swift and effective measures if the mistakes of the past are not to be repeated.

What should be the standard of open spaces and playfields to be aimed at in our towns after the war? In areas where the density of population is never likely to be high it will generally be found sufficient if 10 per cent. can be reserved for permanent preservation for public open space purposes, including playing fields, children's playgrounds, parks, pleasure walks and gardens. But experience has shown that this proportion is insufficient where there is now, or is likely to be hereafter, a high density, and it is now generally admitted that the minimum area of public open spaces required in thickly populated districts is six acres per 1,000 of the inhabitants. In the United States of America, town planning experts agree in recommending a minimum provision of five acres per 1,000. The National Playing Fields Association, as the result of careful and independent inquiries, has come to the conclusion, which coincides with that independently reached by the Juvenile Organization Committee and America, that the minimum requirements of public open spaces are five acres per 1,000 of the population, of which four acres are needed for team and other games, and one for amenity and general open space purposes. In addition to this, however, a further three acres of private playing fields per 1,000 of the population are needed by colleges, schools, private sports clubs and industrial firms.

G. McAllister: It would be foolish to expect the Prime Minister or any other member of the War Cabinet to devote, at this stage in the war, more than a modicum of attention to post-war planning. But when we have two Ministers (Sir William Jowitt and Mr. W. S. Morrison) appointed solely to get on with this job, the public expect to get, from time to time, at least an inkling of what goes on in their departments.

The dust has settled thick on the pigeonholes in which lie the Barlow and the Scott Reports. But at least they are not past hoping for. There are sinister rumours that the Uthwatt Report has been torpedoed before Parliament has had an opportunity to discuss its recommendations.

All the big issues of planning are apparently being ignored—or if they are not being ignored, the public are being deliberately kept in the dark. The enthusiasm of local authorities, eager to get ahead with their plans, is in danger of being crushed by the negative attitude at the top.

We still await decisions about (1) a national policy for the location of industry; (2) a policy of decentralization of population and industry from the distended cities; (3) a policy for the creation of new towns; (4) a policy for rural land use; and (5) most important, a decision that the people of this country are to be given the houses and gardens they so ardently desire and not the sardine-tin tenements which are built, not because people want them but because of non-planning in the past and the high land values of our urban centres.

Tudor-Walters, Barlow, Scott and Uthwatt have, over two generations, presented us with the basis for a first-class planning policy. Two Ministers are apparently prepared to sit for years, painfully, laboriously and tediously, trying to decide whether or not they agree with the experts.

There is grave danger that the brilliant leadership which is winning the war will be, in fact, in vain because we shall (with respect to a now famous back-bench M.P.) completely "Muff the Peace," as far as ordinary people's homes and living conditions are concerned.

TCPA

F. J. Osborn

September 2, at 1, Grosvenor Place, S.W.1. Lunch-time meeting organized by the Town and Country Planning Association. Lecture on THE COUNTY OF LONDON PLAN, by F. J. Osborn, Hon. Secretary of the TCPA. Chairman: Rt. Hon. Sir Montague Barlow, Bt.

F. J. Osborn: London and other cities need planning because certain things are gravely wrong with them from the point of view of the mass of their citizens. We must recall what those things are before we can judge any plan.

From the point of view of the ordinary man and woman (which is what matters most) the chief things wrong with London are:

(1) The great and growing difficulty of having a family house (with garden) in pleasant surroundings, reasonably near work. This presents a personal dilemma to millions of Londoners; either a home of the right sort in a distant suburb, with a tiring and expensive daily journey, or living near work in an unsatisfactory dwelling. The poorer Londoners, especially, can't afford the suburban journey. Those who stay in the centre have to put up with very bad housing conditions there.

(2) The congestion of streets and the means of transport. The daily journey for many is not only long and costly but uncomfortable. In peacetime, on several tubes, 100 per cent. overloading at peak hours had become normal.

(3) Insufficient space for recreation. The county, which contained 4,000,000 residents in 1939, had less than two acres of open space per 1,000 people, of which only half an acre per 1,000 was usable for games. (The recognized standard is six or seven acres per 1,000.)

These are the big drawbacks. All are serious, but the most serious is the state of housing. In the inner boroughs, hardly any houses have garden space. About two-thirds of the people in the county cannot get separate houses at all, but live in apartments of three rooms or less. One-third live in apartments of one or two rooms only. Rents are high. As compared with a worker in York a London worker pays 6s. a week more rent, which nearly cancels out his 7s. 6d. more pay. In a large sample of working-class houses only one in ten was found to have a bathroom.

London changed rapidly between the two wars. The changes were making the fundamental situation not better, but worse. The main factor was a huge growth of population, due really to the increase in London's business and industry. A large part of this business expansion was in the City and the central boroughs. As business expanded, more people were employed in the centre and living space was encroached upon.

The more prosperous residents moved out to the suburbs. Nearly 1½ millions actually moved out of the county between 1911 and 1938, but this was partly counteracted by natural increase (excess of births over deaths), so the nett loss in the 27 years was about 450,000. But the migration was speeding up just before the war. In the last seven years (1931-1938) the nett loss to the county was 320,000. About 50,000 a year were moving out and the natural increase in the county dropped to 6,000 a year.

But in the 27 years (1911-1938) the total population of Greater London increased by about 1½ millions, to 8¾ millions. The county declined by 450,000, but the outer ring gained by 1,900,000—670,000 due to migration and the rest to natural increase. Natural increase, of course, was slowing up; in the seven years 1931-1938 for Greater London it was 188,000 and for the county only 41,500.

Now while the residents in the county in the 27 years declined by 450,000, the number employed there vastly increased. Result, obvious phenomena of London change:

(1) The huge increase in suburban travel; Londoners become more and more a race of straphangers.

(2) Continued and indeed worsened living congestion in the centre—surprising in view of decline of population there, but due to business encroachments on living space.

(3) A spectacular and massive rebuilding of the business centre accounting for the increase of employment there.

(4) An intensification of traffic congestion, due to the increase of the number of people working in and resorting to the central parts.

There were secondary consequences, important socially but not so directly appreciated by Londoners. The divorce from the open country, whether they knew it or not, was a serious injury to them. So was the disintegration of community life, due to so many millions living in one district and working in another, and to the mere size of London.

Another consequence was excessive class segregation. The county report says that among the people who left the county were "the best elements including the young married folk." The reason is obvious—central London is no place to bring up children in. People with strong family im-

pulses, when they can afford it, go out to houses and gardens in good surroundings. Those left behind are (1) the poorer people, who have no real choice, and (2) those who do not give the highest priority to living conditions suited to children. I do not think it is without significance that the births per 1,000 women of child-bearing age just before the war, were 10 per cent. fewer in the county than in Outer London. (In 1937 the comparative figures were 51.3 and 57 and the gap had slightly widened from 1934 to 1937.) This seems to me the more remarkable because in general the birth rate in the poorest sections of the community is higher than the average.

It is against the background of these immensely important social considerations that the County of London Plan should be judged. I am compelled to a radical criticism of the policy and the planning standards which it embodies. But first let me pay tribute to the merits of the plan.

First, its analysis (in the Preamble) of the essential London dilemma is a big advance on any previous authoritative statement. The analysis is consistent with what I have so far said. It brings out what is fundamentally wrong with London development, as any careful examination of London is bound to do. It makes it very clear that a major aim of planning should be to enable people to live as near their work as possible, given proper living conditions, and that the replanning should make Inner London attractive, with pleasant houses, gardens, open space and separation of industries from dwellings. It states the dilemma clearly. You cannot decently rehouse within the county the whole of its 1939 population. It is not satisfactory either to send them to " distant dormitories," or to " cram them into lofty close-packed tenements whose high architectural qualities might mask their social deficiencies."

Both these policies, says the report, " ignore inescapable facts."

It draws, in so many words, the right conclusion. " A large population must be decentralized and as far as possible a corresponding amount of industry." In principle, therefore, the report aligns itself with the Barlow Royal Commission and the policy so long advocated by the Town and Country Planning Association.

Second, the report presents some most valuable facts derived from new surveys. Those concerning the location of industry within London are very important. The theoretical diagrams of possible living densities, though telling nothing new to people with experience of lay-out, make it clear to the lay public that you cannot, without resorting to flats, house more than about 75 persons to the residential acre. These diagrams dispose, once and for all, of a lot of slipshod thinking about what is practicable and what is not in living density.

Third, the report is not afraid of bold rearrangement. It faces the necessity of complete replanning of many congested built-up areas, the drastic re-alignment of main traffic routes and the sorting out of areas used for business, residence and other purposes.

Fourth, it rises to the necessity of a wholesale introduction of public open space. I think the standard adopted, four acres per 1,000 population, is too low, especially as it includes school playgrounds and some other open space not reckoned in the usual standard. But a good principle is accepted and the standard could in practice be improved.

Fifth, the report makes a gallant effort to restore local community life in London, both by the intelligent layout of local centres and by diverting main traffic arteries so that in general they do not cut through neighbourhood units. It will be no easy job to reintegrate social life in London (which has faded away to a greater extent than the report implies), but the emphasis on its desirability is welcome.

Last, there are very many most attractive " amenity " proposals in the report, which must appeal to imaginative Londoners. In particular, the re-array of the magnificent river front for parks and " pleasaunces " is a grand idea, as well as a practicable one.

These are workable and inspiring merits of the plan.

I must come to the major criticism. The plan fails to adhere to the biggest of all its basic principles, and the one that matters most to the citizens of London—the restoration of good family living conditions in the county. Nominally it accepts the decentralization of population and business as a necessity. But it shirks the absolutely essential amount or degree of decentralization of people and is equivocal about the decentralization of industry and business.

It proposes the moving-out of about half a million people from the most congested parts of London, which are those to be first reconstructed. But this half-million does not exceed the number whose employment has in fact been evacuated in wartime; I think actually a larger proportion of London's business has been evacuated, most of which need not be encouraged to come back. Further, even of the half-million some are to be rehoused in the western areas of London, which the report (it is incredible but true) proposes to *increase* in density to 200 per acre—a density which means 100 per cent. of multi-storey flats. In the reconstruction areas a density of 136 persons per acre is proposed as normal. This means housing three-quarters to 80 per cent. of the families in flats, and therefore contradicts the main thesis of the Preamble.

You cannot attract back, or retain " the best elements, including the young married people," by this policy. The only way you can do that, in the long run, is by reversing the proportions—building at least 80 per cent. houses and gardens and not more than 20 per cent. flats. All the surveys show that less than 10 per cent. of families prefer flats, and it is quite hopeless to fly in the face of popular demand on an issue of such importance.

London really must face up to its situation. To make the county habitable—a place in which a self-sustaining population can live permanently—there is no alternative to the decentralization of 1½ million people, bringing the population down to 2½ millions. If, as I think, half a million, with their employment, have already gone out, that means planning for the migration of another million over perhaps 20 or 30 years—which is at a rate not in excess of what was happening between 1931 and 1938.

London must plan also for some reduction of its industrial and business concentration. The plan does not do this. It pays lip service to the theory, but actually it seems to provide rather for an increase than a diminution of business accommodation. The south-bank scheme is good window-dressing, but if employment in London remains static, any such new development must draw off business occupiers from other business areas. If, as is necessary, the total amount of central employment is to be reduced, then the south-bank scheme means an even bigger reduction of business concentration in the City, Holborn and Westminster. Is this intended? There is, as far as I can see, nothing in the report which clarifies the point.

The issue is not an academic one. Nor is it one of the difference between standards which I, or any other individual, personally prefer, and those of the report. As a student of sociology, I am sure the adoption of a policy of building 75 per cent. or 80 per cent. of flats for families would be nationally disastrous. But even that is not the only point. Such a policy is impracticable, simply because Londoners, in their private capacity, will not accept it. No amount of propaganda can over-ride human preferences on a matter so fundamental. Politically, in the peculiar set-up of London, with its elected persons so remote from its populace, the policy might be started. But it would not get far. The slum-dwellers, the under-privileged, the inert, the helpless, can be transferred into flats. The "best elements " cannot. They will in fact continue to migrate to places where houses and gardens can be obtained. A rise in the standard of life will accelerate this process.

Hence, if London is so short-sighted as to hang on to, or even increase, its present huge central business concentration, we are sure to see a resumption of the suburban sprawl, the LPTB extension programme will proceed (probably with Government subsidies), most of London's country-belt will be built over, and strap-hanging and street congestion will increase.

But these things will bring their economic nemesis. After a time, perhaps very soon, the migration of industry and business to the suburbs, following its own employees, will speed up and exceed London's capacity to attract new business. Unoccupied or derelict business areas will begin to spring up. In the end the rebuilding of central London at a decent density will be made possible in this way. In the meantime the general sprawl and confusion will have created planning problems for the future.

London should grasp the situation *now*. It should plan to rebuild for 2½ million residents in the county, 80 per cent. of its families in houses, with gardens, over a 20-30 year period. The excess population, with a corresponding proportion of industry, should be handsomely provided for in new towns, and extensions of existing towns, between 20 miles and 50 miles from the centre.

NARB

New Constitution

A special general meeting of the National Association of Registered House-Builders (known familiarly throughout the industry as the NARB) was held in London on September 2, when the new constitution, revised to meet post-war conditions, was adopted.

In a progress report from the Council it was stated that it had been decided to form, under the Constitution of the Association, a London and Southern Division and that a substantial increase of the membership had resulted in consequence. There are now three Divisions centred on Manchester (Northern), Coventry (Midland) and London (South Eastern).

The term Registered House-Builder indicates a firm which has undertaken to build no houses whatever that do not conform to the standards prescribed by the National House-Builders Registration Council (a body approved by MOH) and to permit the Inspectors of that body to inspect their houses at all stages of construction with a view to certifying that they comply with the Government-approved specification. The Registration Council undertakes to indemnify against loss any person who may suffer by reason that a house which the Council has certified may later be found *not* to comply with the approved specification.

NARB has now appointed six *ad hoc* Committees to consider and report upon the following subjects :—

A. Barlow, Uthwatt, Scott and Beveridge Reports, and their bearing upon the provision of houses by private enterprise.

B. War-time developments in prefabrication and preassembly of parts and their possible application to house-building.

C. Building costs; steps necessary to reduce inflated war-time costs to economic level, particularly with a view to post-war building.

D. War-time building; lessons to be learned from extended Government control.

E. Immediate post-war housing policy; availability of subsidies to private enterprise equally with local authorities; steps necessary to counter extension of wasteful direct labour activities.

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F. Collaboration with building societies on all matters of mutual interest.

All these various Committees will report to the Council and it is hoped that within a relatively short space of time the Council will be able to evolve a policy which can be adopted as the policy of the Association. "Then," says the Association, "without waiting for the Government to interfere in the affairs of the industry and extend its direction and control of the Industry, the Association will be able to take such steps in Parliament, in the press and in the areas of all local authorities throughout the country as will obtain for private enterprise a fair field for their activities. Thus and only thus can the infiltration of bureaucracy into the building industry be countered and the healthy conditions brought back which enabled private enterprise to build 75 per cent. of the astronomical figures of house production in the years between the wars—reaching at one period as high a proportion as 87 per cent. Thus and only thus can the country be saved from the muddle of subsidised local authority building; of misuse of labour and restricted production of materials; of restrictive, impractical and abortive planning and all of the ills that would follow as a natural consequence of the continuance and extension of the control of the building industry by Government departments."

RIBA

Examination Results

The Final Examination was held in London and Edinburgh from July 7 to 15, 1943. Of the 65 candidates examined, 27 passed; 38 candidates were relegated.

The successful candidates are as follows: Cadwallader, John D., Cook, Laurence A. L. (subject to approval of thesis and remaining testimony of study), Cresswell, Donald R., Eden, A. Maurice, Forrest, Frank (distinction in thesis), Harper, William S., Hayman, George A. C. (subject to approval of thesis), Holderness, N. Ross (subject to approval of thesis), Jarrett, Maurice C. (distinction in thesis), Jones, Herbert, Knott, Ronald F. (subject to approval of thesis), Lindars, Leslie W. (subject to approval of thesis), Mitchell, John, Morris, William (subject to approval of thesis), Owen, Stanley G., Pearce, George A. H. (subject to approval of thesis), Smith, R. S. Wilson, Smyth, W. Granville, Trigg, Geoffrey H. (distinction in thesis), Weed, Charles H.

Part 1 only.—Flint, John B., Hepworth, A. Jackson, Julius, George L., Lawson, Theodore F., Walters, William J. (subject to approval of remaining testimony of study), Worthington, Clifford (subject to approval of remaining testimonies of study).

Part 2 only.—Kerr, Frederick H. (subject to approval of thesis).

SPECIAL FINAL EXAMINATION.

The Special Final Examination was held in London and Edinburgh from July 7 to 14, 1943. Of the 34 candidates examined, 15 passed (3 of whom sat for and passed in Part 1 only) and 19 were relegated.

The successful candidates are as follows: Booth, Raymond R., Davey, William G. H., Docherty, James, Hammond, Horace G., Kirkpatrick, Geoffrey, Law, Charles, Pearce, A. Roger, Penrose, G. Richard, Pogany, Denes, Sidwell, J. Roland, Skelton, Leslie G., Turner, Ronald J.

Part 1 only.—Khachadourian, L. Y. M., McArtney, John W., Thompson, A. Roy.

Examination in Professional Practice (for Students of Schools of Architecture recognized for exemption from the RIBA Final Examination).—The examination was held in London and Edinburgh on July 13 and 15, 1943. Of the 9 candidates examined, 8 passed and 1 was relegated.

The successful candidates are as follows: Baird, David L., Caro (Miss) Rachel A., Chandler, H. Brian, Eastwick-Field (Mrs.) E., Evershed, Dudley G., Hyland (Miss) Joan L., Junge, Helmut, Paynter (Miss) Rachel M.

Examination of Licentiates to qualify for candidature as Fellows.—The examination of Licentiates to qualify for candidature as Fellows was held in London from July 7 to 12, 1943. Of the 7 candidates examined, 5 passed and 2 were relegated. The successful candidates are as follows: Adie, George M., Ashby, Leslie J., Edwards, Clifton, Fifield, Cyril, Newton, Ernest A.

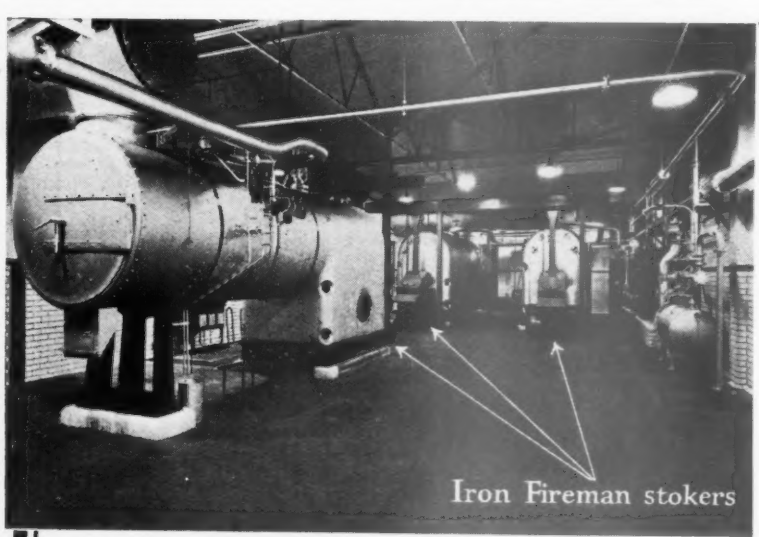
ANNOUNCEMENTS

The Prosecutions Branch of the Board of Trade has moved to Abbey House, Victoria Street, London, S.W.1. Telephone: Abbey 4333.

Mr. Naim Barzel, A.A.DIP., architect, has opened an office in Kreimet, Baghdad, where he would be glad to receive manufacturers' catalogues.

Mr. C. B. Mitcalfe Dale, M.I.A.E., has been appointed Chief Engineer of the Engine Division of the Brush Electrical Engineering Co., Ltd., and subsidiaries, of Loughborough, on the resignation of Mr. H. V. Senior who becomes consultant to the Company.

The English Joinery Manufacturers' Association (Incorporated), now situated in their new offices at Sackville House, 40, Piccadilly, W.1 (Tele.: REGent 4448/9), will shortly be joined there by their advisory architect, Mr. Frederick MacManus, A.R.I.B.A., who, up to the present, has occupied accommodation in other quarters.



One-two-three

The boilerhouse illustrated was first built to house one locomotive type boiler, to which an Iron Fireman Hopper Type Stoker was fitted. It was later enlarged to take a second boiler and the same type Iron Fireman was chosen. A further extension was made to take a third boiler and again the same type Iron Fireman was fitted.

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LEEDS (1): 6 Carlton Chambers, Albion Street. MANCHESTER (13): 184 Oxford Road.

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The Gas Industry is playing an important part in the development of this new industry, for much of the basic material for plastics comes from the gas-works. In fact, the modern plastic industry would probably not exist but for the substances extracted from coal in gas-making.

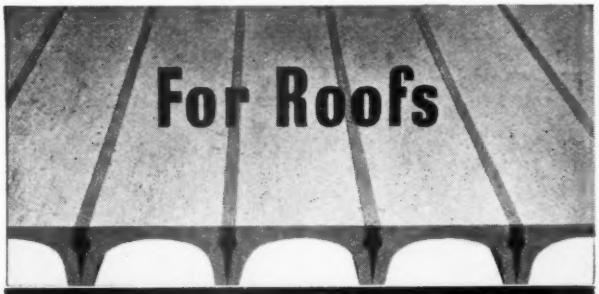
The Gas Industry has a far deeper knowledge of coal and its derivatives than was dreamed of a few years ago, and through its by-products — coke, tar, benzole, ammonia and sulphur — it is meeting the need for hundreds of substances in other industries as well as plastics. Tar provides basic materials for road-tar, disinfectants, dyes, food flavourings, life-saving drugs — in addition to plastics. Benzole, ammonia and sulphur produce vast quantities of explosives, aviation spirit, camouflage paints, industrial acids and agricultural fertilisers.

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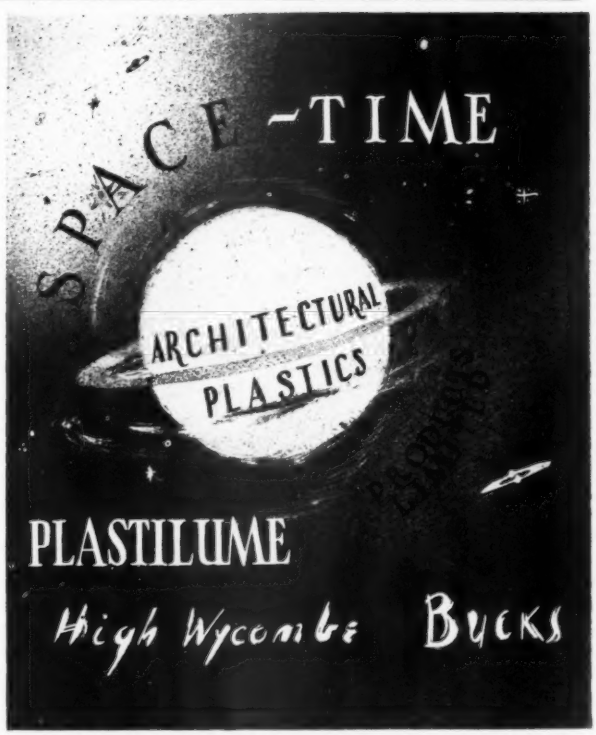
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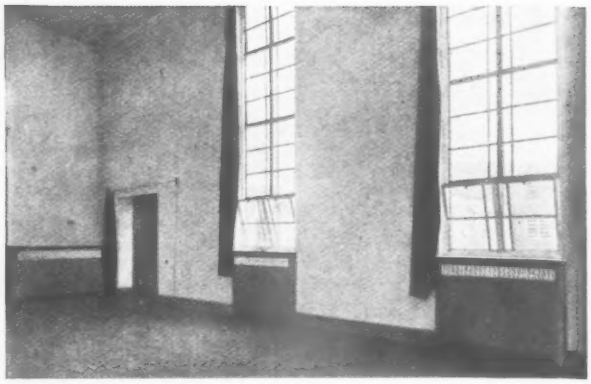


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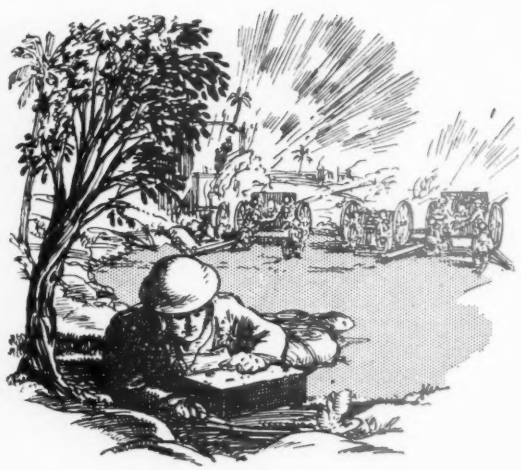
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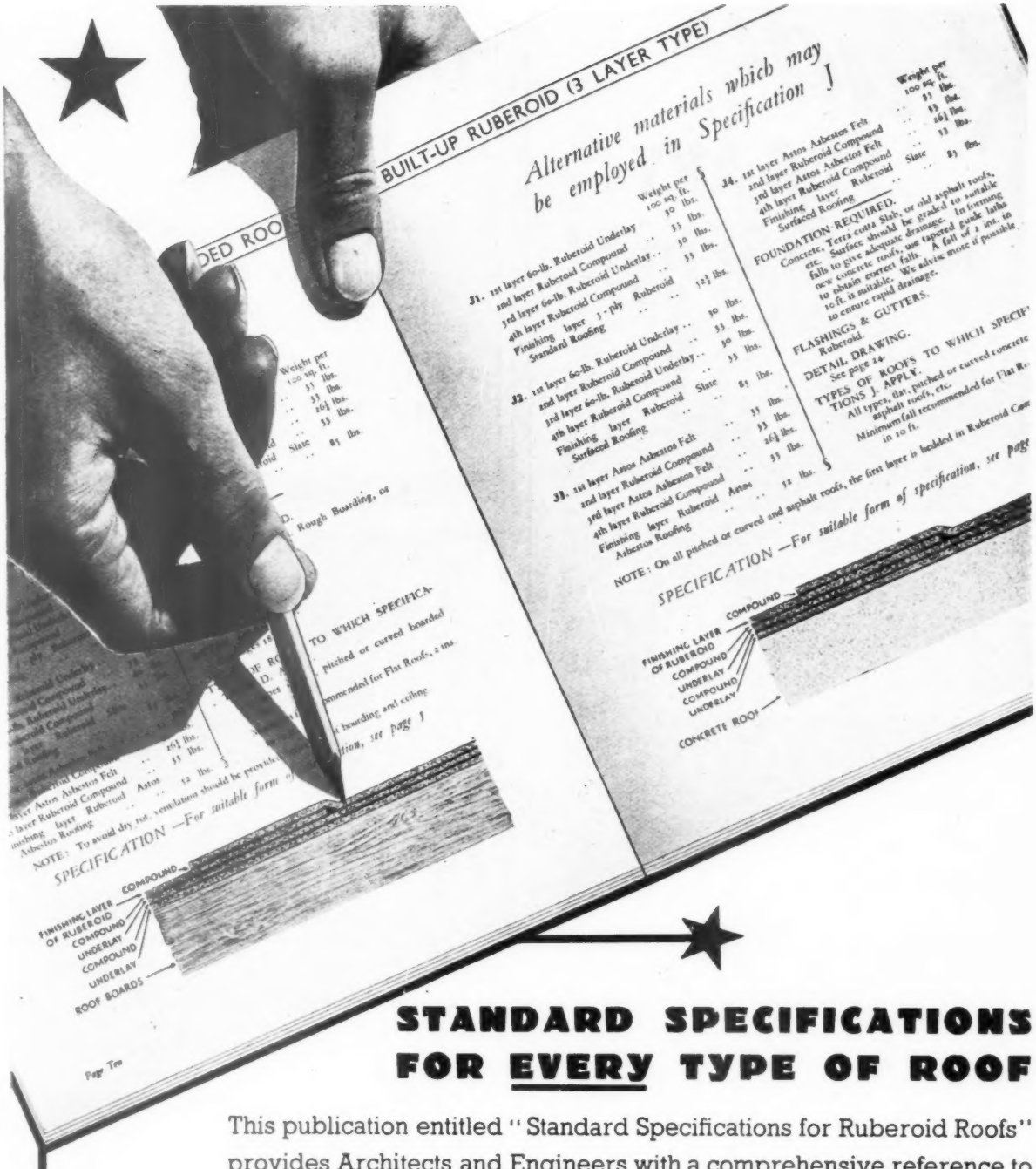
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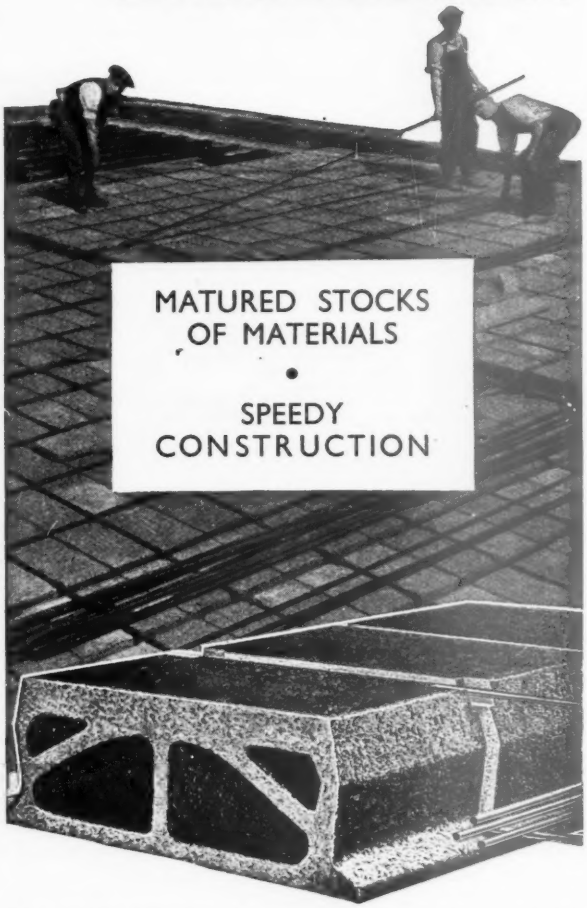
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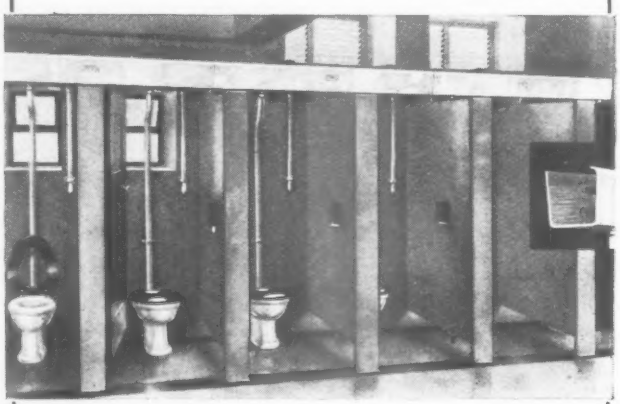
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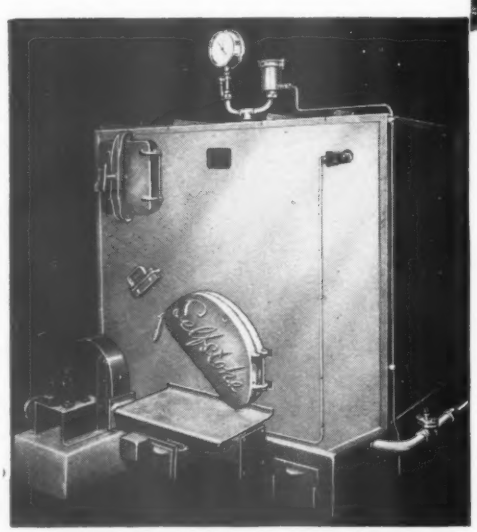
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Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

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YOUTH, 17, registered as Probationer; distinction in Drawing, London General Schools. Would like summer vacation work in architect's office, from August 16 to September 20. Write R. Burbidge, c/o 53, Beattyville Gardens, Ilford, Essex. 135

CHARTERED SURVEYOR; qualified town planner experienced in research work; some experience of journalism and publicity; ineligible for military service; would be interested to hear of any remunerative opening for his services. Box 137.

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Classified Advertisements continued on page xl



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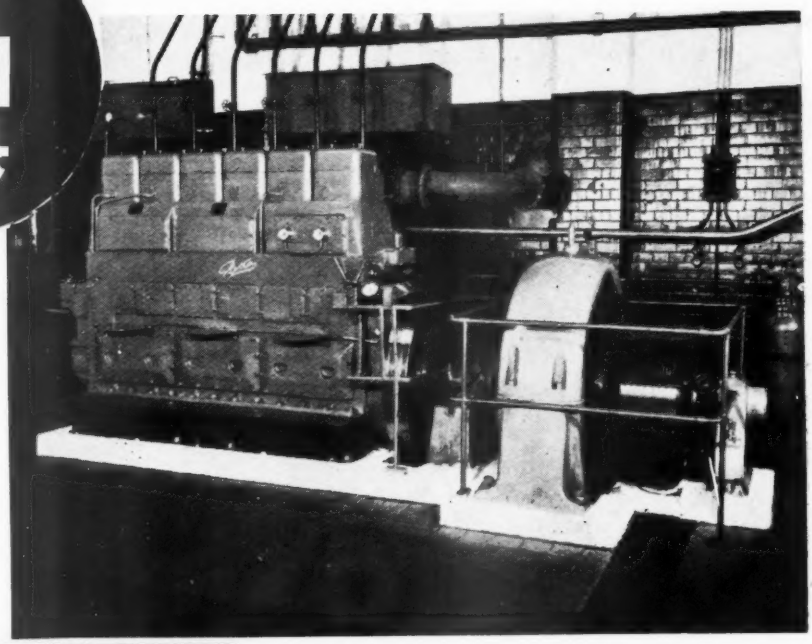
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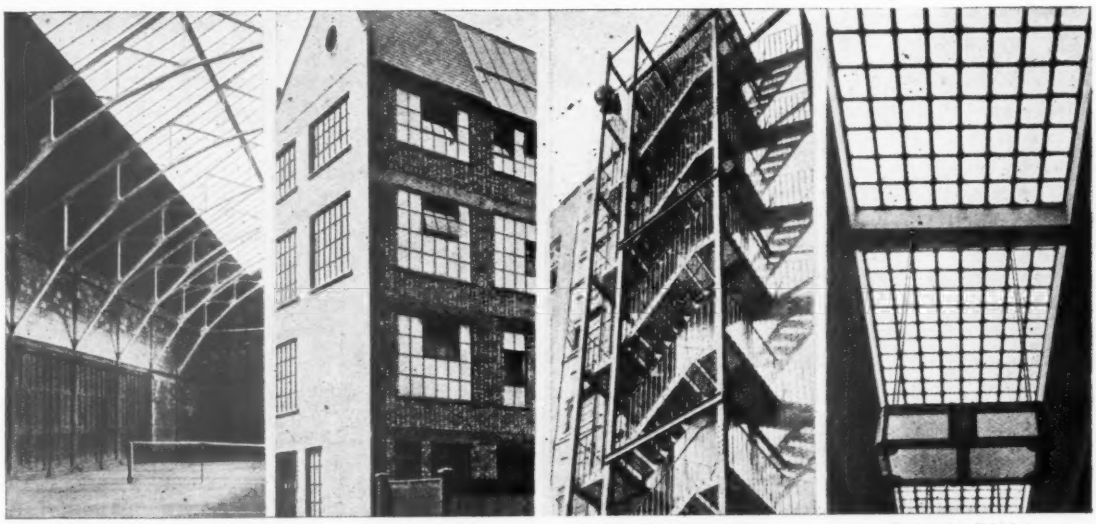
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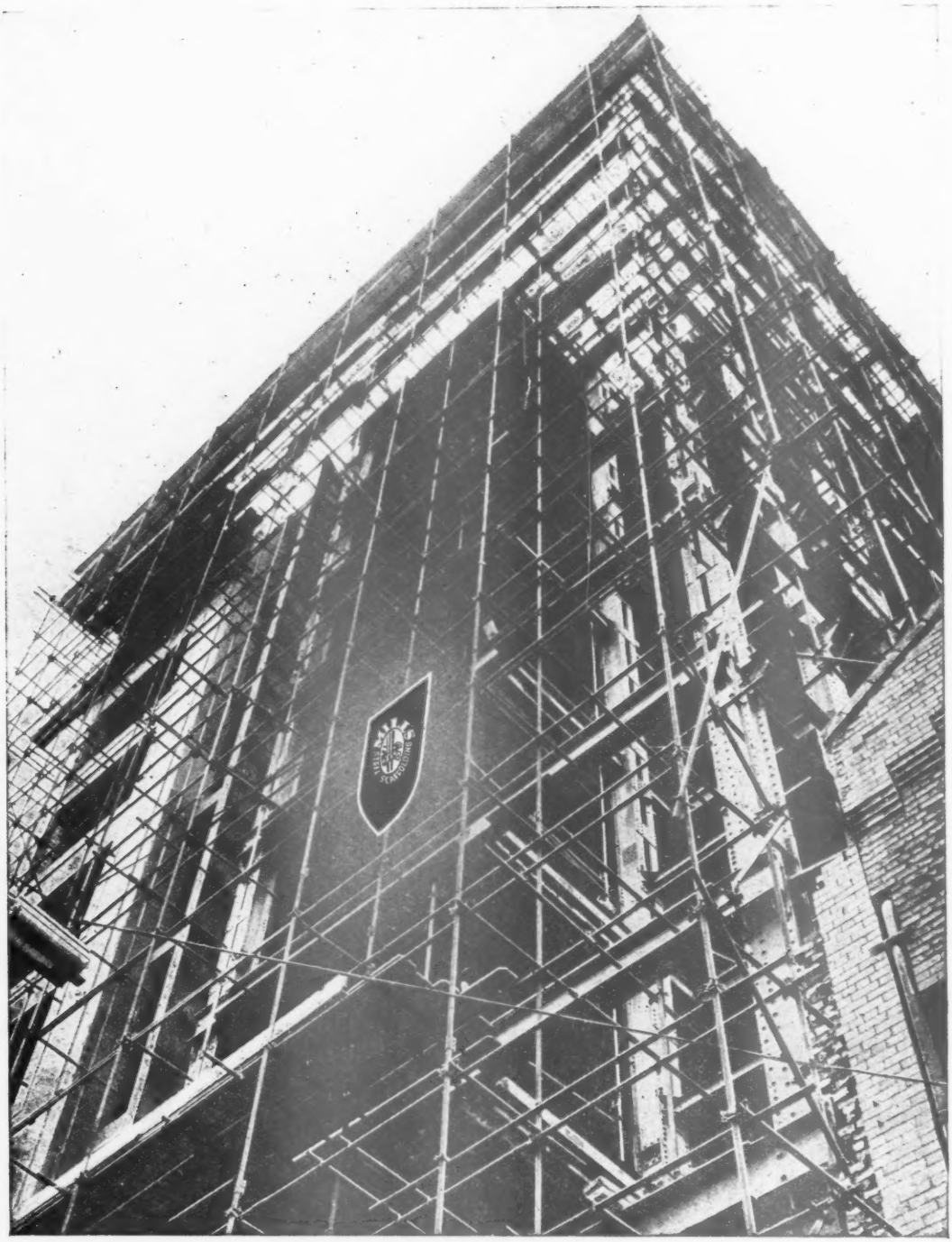
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